DOCUMENT RESUME

ED 297 267 CS 009 200

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TITLE A Case Study of Biliteracy Reading Acquisition in Two Non-Public Schools.
PUB DATE Jun 85
NOTE 275p.; Ph.D. Dissertation, Yeshiva University.
PUB TYPE Dissertations/Theses - Doctoral Dissertations (041) -- Reports - Research/Technical (143)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Basal Reading; *Beginning Reading; Bilingual Education; *Bilingual Education Programs; *Bilingualism; Bilingual Schools; Class Size; Code Switching (Language); Diglossia; English (Second Language); *Ethnography; Greek Americans; Language of Instruction; Multivariate Analysis; Primary Education; Reading Instruction; Reading Processes; Reading Research; Reading Skills; Reading Strategies; *Second Language Learning
IDENTIFIERS Armenian Americans; *Biliteracy; Ethnic Schools

ABSTRACT

A study investigated initial reading acquisition in English and an ethnic tongue in two New York schools (Holy Martyrs, Armenian and St. Spiridons, Greek) which are representative of an immigration-based biliteracy tradition. The population consisted of students who were mostly (at least 80%) native born, English dominant, and from bilingual speaking and most biliterate homes. Related pedagogical process variables were also analyzed. Findings, based on 164 ethnographic observations in the two schools included: (1) that reading of English and of the ethnic tongue occurred to a similar extent; (2) that reading in both languages occurred more frequently than other language activities; (3) that in many cases, both languages were used; (4) that oral reading strategies predominated; and (5) that basal readers were the prevailing approach in both English and ethnic tongue reading. Exploratory analyses suggested that significant relationships do exist among reading and process variables and identified four independent dimensions of the initial reading acquisition process: English reading, class size, experiential approach, and grade level. (Three figures representing models of bilingual proficiency and 33 tables of data are included: eight appendices containing an inventory of variables, sample protocal, coding categories and related materials, and 188 references are attached.) (MHC)

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ABSTRACT

A CASE STUDY OF BILITERACY
READING ACQUISITION IN TWO
NON-PUBLIC SCHOOLS
by
Carole R. Riedler-Berger

The present study of initial reading acquisition in English and the ethnic tongue and of a myriad of related pedagogical process variables was based on 164 ethnographic observations in two schools representative of an (im)migration-based biliteracy tradition. The study yielded ethnographically derived variables and a coding format that provided for the quantification of those variables. Although these findings cannot be generalized, several suggest important implications for bilingual education. English and ethnic tongue reading occurred to similar extents: reading in both languages occurred more than other language skills, and actual reading occurred more frequently than intended; both languages were used in nearly half of the observations, with 82% of such usage being in a non-interfering manner; oral reading strategies predominated; basal readers were used almost exclusively.

Exploratory analyses, including multivariate analyses, suggested significant relationships do exist among reading and process variables, and suggest four independent dimensions

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of the initial reading acquisition process: English Reading, Class Size, Experiential Approach and Grade Level. The "School" variable functioned the same as the "Class size" variable in the regression analyses, suggesting that differences between schools on study variables were attributable to differences in class size. The Chall-emphasized methods (decoding) and strategies (oral) did not constitute a unitary dimension. Synthetic (decoding), but not analytic (meaning), methods were related to reading and to grade level. Reading strategies were related to class size.

The present study has provided a basis for more structured studies and the possibility of identifying process predictors of reading proficiency. The ethnographic process has highlighted influences and raised questions for classroom teachers, reading and curriculum specialists, and educational administrators about assumptions that may often be overlooked in beginning language arts programs.

A CASE STUDY OF BILITERACY READING ACQUISITION IN TWO NON-PUBLIC SCHOOLS

by

Carole R. Riedler-Berger

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
Ferkauf Graduate School
Yeshiva University

June 1985

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by

Carole R. Riedler-Berger

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Joshua A. Fishman, Ph.D.

DEDICATION

This dissertation is dedicated to the two most significant men in my life.

First, to my husband, Sidney, whose strength and confidence helped guide me through "the darkest hours" of this study.

Second, to the memory of my father, Julius Weiss. Although he never completed his formal education in his native country, he steadfastly encouraged me to acquire mine.

ACKNOWLEDGEMENTS

There are many special people whose influence and support have been an integral part of my completing this research project. It is my desire at this time to express my deepest gratitude to them.

I wish to acknowledge my appreciation to the members of my dissertation committee, Dr. Julian Roberts and Dr. G. Zachary Edelstein. In addition, a special note of thanks goes to Dr. Joshua Fishman, my committee member, who introduced me to the process of ethnographic inquiry and its relationship to educational research.

Many thanks go to my loving family who had the confidence in my ability to complete this project and helped in innumerable ways: my mother, Sadie Schumowitz; my mother-in-law, Szerene Berger; our children, Marc and Julian Riedler, Lydia Berger, Karen and Craig Spencer; and my granddaughter, Jessica Spencer.

A note of gratitude goes to my dear friends, Susan Putterman, Carole Bermann, and Freda Birnbaum, who helped to make the unmanageable, manageable.

Thanks to the members of the faculty and administration of the Department of Special Programs and the ESL Program of the City College who supported my efforts to complete this project.

This dissertation could not have been completed without

the technical assistance of Dr. Jeanne Warner, who provided assistance with the research design and statistical procedures of the project; Patricia Pagano who transcribed my "scribble" into readable text; and Dr. Michael Gertner and Gladys Ortiz who helped with establishing inter-rater reliability for the project.

Finally, I would like to thank the pupils, teachers and administrators of the Holy Martyr's School and the St. Spiridon's School who participated in this project.

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CHAPTER I

INTRODUCTION

The present study examined ethnographically derived data on reading acquisition in English and in the ethnic tongue and on associated pedagogical variables in two schools (Armenian and Greek) purported to be representative of an (im)migration based biliteracy tradition. This examination was undertaken in an attempt to provide additional insight into the classroom dynamics of bilingual education.

Background of the Study

Some of the major legislation and court rulings promulgating bilingual education in the public schools of the United States include the Bilingual Education Act (1968), which evolved from Title VII of the Elementary and Secondary School Act of 1965 (as amended in 1967); the Lau vs. Nicholas Supreme Court ruling (1974); the Educational Opportunities Act of 1974; and the Bilingual Act of 1978. These mandates essentially required that school districts provide some type of "appropriate" action in the form of special instruction for language minority students who did not understand English or were of limited English proficiency.

In response to the edict of the legislation and the court rulings many bilingual programs were instituted in a variety

of ways. Related research of both a theoretical and empirical nature has been extensive. Initially the research emanated from a linguistic perspective, focusing primarily on first (Brown, 1973; Lenneberg, 1967) and second language acquisition (Anderson, 1978; Kessler, 1971; Taylor, 1981). Other similar research focused on the possible derivation of both initial and second languages from the same underlying process (Ervin-Tripp 1970, 1981; Burt and Dulay, 1973; Krashen, 1980).

Additional research on language acquisition and bilingualism specifically dealt with the bilingual child and the degree of proficiency he or she had in both languages (Albert and Olber, 1978; McLaughlin, 1978). The degree of proficiency ranged from native proficiency in both languages (Kessler, 1971) to native like proficiency in the first language with varying degrees of proficiency in his second language depending on when, how (instruction versus exposure), and why he acquired the second language.

This linguistic-psycholinguistic research failed to take into consideration the second requirement of the Lau Guidelines (OCR 1975) which directed the schools to consider both the cognitive and affective aspects of how children learn, so that appropriate teaching styles could be applied to assure students' educational achievements. Although not all of the following research was motivated by bilingual education goals, their impact on bilingual education is significant. Research on the effects of cultural

differences as related to language acquisition include that of Hall and Guthrie (1981). These researchers maintained that there are cultural differences in the functions and uses of language among various ethnic groups. They hypothesized that a mismatch between the functions and uses of language at home and at school may account for the educational difficulties minority children have at school (p.p. 210, 222).

McDermott (1976) suggested that the communicative codes used in the home and community of children from minority communities differ from that of their host schools. These differences continuously affect the mastery of skills and concepts. Cazden and Leggett (1981) contend that cultural differences exist in both cognitive information processing styles and in the interactional contexts in which people learn. The classroom environment, especially in bilingual programs, is a source for learning because normative behavior in the classroom becomes a model for interaction in society.

Many of the evaluations of bilingual programs document the effects of the programs on the academic, linguistic, cognitive, and social development of its students. They provide little information on the "dynamics" of the situations in which these students are involved (Bruck, Schultz, Rodriguez-Brown, 1979). Stubbs (1980, p. 163) emphasized that reading and writing always take place

in cultural and social settings. He believes that a major gap in work on literacy acquisition is the lack of direct classroom observation of children actually learning to read and write in real lessons.

Fishman wrote in 1977:

> There is as yet no data (on classroom dynamics) even though the consensus of expert opinion is definitely that the school environment is of overriding importance with respect to bilingual education outcomes...social dimensionality must be recognized within the bilingual education classroom, rather than merely outside of it in "the community" and "in society". Societal factors dictate much of what is taught and to whom; as well as how it is taught and by whom; and finally how all of those involved in the teaching-learning process interact with each other... Unfortunately, none of these topics has been well documented to date and the ethnography, the sociology, the social-psychology and the educational psychology of the bilingual education classroom are all little more than gleams in the eyes of a few researchers (p.32).

Rationale

The application of ethnographic research in the investigation of bilingual education has largely focused on language and socio-cultural factors. Fishman's research (1979-1982) is an example of how ethnographic exploration can be applied to bilingual education. It examines the acquisition of biliteracy via a comparative ethnography of four ethnolinguistic schools in New York City. The schools were selected to facilitate the investigation of factors that might influence the acquisition of biliteracy. Fishman hypothesized that "the major 'unknown' with respect to biliteracy acquisition may not be so much that two

languages are involved instead of the more common one, but that each provides a hitherto unrecognized context for learning, using and evaluating the other" (Fishman, 1979, p. 1). Of the four schools involved in that study, two were purported to be representative of an (im)migrant based biliteracy tradition (IB). These were the Armenian and Greek Schools.

Four ethnographically derived interactive dimensions, labeled "sociofunctional", "sociopedagogic", "sociolinguistic", and "sociographic", were studied to provide substantial comparative perspectives. In addition, the research hoped to provide insight into whether the societally related factors, the "sociofunctional" dimension which seemed to be significant for successful biliteracy acquisition, were primarily in-school or out-of-school in nature (Fishman, Project Abstract, 1979).

During the investigation it became apparent that the "sociopedagogical" dimension as defined, categorized, discussed, and analyzed evidenced more variability than the other three dimensions. One example of this is found in the analytic parameter called "medium of instruction". "...it is noteworthy that in EMT*-medium of instruction, teacher made materials are more commonly employed than basal readers, whereas in English-medium instruction the opposite is the case." "...silent reading...was much more common in English-medium than in EMT medium instruction." In

*EMT is referred to in the Fishman et. al. Study, 1982, as the ethnic language used in the respective study schools.

comparison with the previous report of overall ethnographic impressions, "the present report finds much more variability along the 'sociopedagogic' dimension." The study suggested that additional research be conducted to clarify the "sociopedagogical" dimension and test various ethnopedagogic hypotheses pertaining to it (Final Report, pp. 35-37).

This research attempted to reexamine the dynamics of the "sociopedagogical" dimension of the previous study. By virtue of the fact that the Armenian and Greek Schools were both representative of IB ((im)migrant based biliteracy), one might assume that they would evidence "degrees of similarity" in respect to the acquisition of biliteracy. Thus only these two schools constituted the present study sample. The research focused on the "(socio) pedagogy" of reading skills acquisition in English and in the ethnic tongue (ET) at the sample schools. It also explored whether there were similarities and differences between the two schools and between grade levels on reading acquisition and the "(socio)pedagogical" variables.

Importance Of The Study

Federal support for bilingual education programs has been reduced by $23 million from $161 million in 1981 to $138 million in 1982 (Holsendolph, 1982). This decrease is not commensurate with the present and rapidly increasing population of the more than 3.5 million students whose functional language is not English. Roos' (1982) prediction

that this this population will increase by 40% by the turn of the century further exacerbates the situation of decreasing funding and increasing enrollments. Only those educational programs which demonstrate substantial "contributions" to the education of the student populations they serve will be eligible for the paucity of funds available from the federal government. It is therefore incumbent upon administrators, supervisors, and educational policy makers to develop, modify, or refine their programs to fit the needs of their students.

There is a paucity of data on biliterate reading acquisition actually observed in the classroom, and on the "(socio) pedagogical" variables that occur in relation to that reading acquisition. Teachers and researchers can obtain valuable insight into the prccess of reading acquisition characteristic of a first language and a second language through this analysis of the multiplicity of pedagogical variables which may be related to biliteracy development in the early primary grades.

Research on the dynamics of reading acquisition in relation to performance outcome must speculate on what variables should be examined in future studies. Given the myriad of process variables it would be helpful for educators to know what specific pedagogical variables are actually related to reading acquisition. Such findings might give educators a more accurate picture of some of the actual reading acquisition dynamics that can be

utilized in developing curricula and teacher training bilingual education programs

Statement of the Problem

In an ethnographic examination of two schools representative of (im)migration based biliteracy,

> What are the pedagogical variables that characterize English and ethnic tongue (ET) initial reading acquisition?

"For many ethnographers, an essential characteristic of ethnography is that it is open-ended and subject to self-correction during the process of inquiry itself" (Hymes, 1978, p. 8). Because ethnography is philosophically based in phenomenology, the ethnographic researcher would do best not to formulate fixed assumptions and variables which can be tested by administering a questionnaire or a standardized test. Therefore, this ethnographic investigation attempted to examine the dynamics of the following -

theoretical construct:

> In different schools representative of the same constellation of biliteracy, there will be identifiable pedagogical variables that characterize English and Ethnic tongue (ET) initial reading acquisition.

operational construct:

> In the primary grades of the Armenian and Greek Schools, representative of immigration based biliteracy, certain pedagogical variables will be significantly related to English and ethnic tongue (ET) initial reading acquisition.

The following questions, derived from the literature on biliteracy acquisition and reading research, gave rise

to the kinds of questions that were looked at in the process of initial reading acquisition for English and the ethnic tongue and related "(socio)pedagogical" variables; across the primary grades in both schools. Differences between schools and between grade levels on these variables were also examined.

1. What are the sizes of the classes where reading acquisition takes place?
2. Where is reading acquisition taught in the school (in class, out of class, out of school)?
3. Who teaches reading (academic personnel, non-academic persons)?
4. What is the sequence of languages being taught (English first, ET first, both simultaneously)?
5. What is the intended and/or actual subject(s) of learning at the time of the protocol observation (PO)?
6. What is the language used (medium of learning) with the intended and/or actual subject(s) of learning? Do the two languages influence one another?
7. What methods, approaches, strategies, and units of instruction are used in teaching reading?
8. What types of materials are used to teach reading? Where do they come from? What types of themes do the materials contain? Are they related to ethnic or secular concepts?
9. What, if any, are the unobtrusive measures or

literacy present in the classroom and outside of the class?

10. What types of out of class reading experiences are there both within and out of the school?

11. What, if any, evidence of cultural congruence or cultural sensitivity is manifested by pupils and/or teachers?

12. Is there any representation of motivation for literacy acquisition present both in and out of school?

Delimitations

1. It was not the intention of this study to examine proficiency as a variable, but to utilize an ethnographic approach to acquire information regarding classroom process variables related to initial reading acquisition.
2. Class activity was the basic unit of analysis. Therefore, individual student variables such as sex, prior and outcome reading levels, socio-economic status and background characteristics were not examined.
3. Classes and grades were delimited to those in which initial reading was taught.
4. The duration of time that study variables occurred was not considered.

Limitations

1. Schools used in this study were not randomly selected.

They were considered to be typical of the universe of some 1500 minority ethnic community all-day schools (Fishman et al., 1982).

2. Observational reports were derived disproportionately from the first grade (Fishman et al., 1982).

3. Observations were not spread through the entire first year and only through one-half of the second year. Literacy acquisition phenomena particular to the first month and last month of the school year are underrepresented in this study (Fishman et al., 1982).

4. Inter-year stability within the schools studied was not high. For example, because of financial exigencies and an accompanying increase in immigration of non-English families the Greek School experienced a major increase in class size (Fishman et al., 1981). The Armenian School experienced the loss of their first grade English teacher, who spoke Armenian, at the end of the first year of the study. A first grade teacher who spoke no Armenian was hired in the second year of the study. Fishman et al. considered this to be a random error factor.

5. Although the original data collection (Fishman et al., 1979-1982) provided for observer reliability the observers had no knowledge of the Greek and Armenian languages.

Assumptions

1. The schools selected for the study were assumed to be representative of the universe of some 1500 minority ethnic

community all day schools in the U.S. today. They were sponsored by local ethnolinguistic communities and are frequently associated with ethno-religious tradition (Fishman et al., Final Report/Part I, 1982, p. 2).

2. The Armenian and Greek Schools selected for the study were representative of an (im)migration based biliteracy tradition (Fishman et al., 1980, p. 51) and similar biliteracy reportoire ranges (Fishman et al., 1979, pp. 13-16).

3. The schools selected were representative of the middle-class in regard to socio-economic status and in standards of attainment (Fishman et al., 1982).

4. The schools were similar in other demographic ways. The sample set, "class", was composed of students who were primary native born, English dominant and from bilingual speaking and modestly biliterate homes. The teaching and administrative personnel also tended to be predominately bilingual and biliterate (Fishman et al., 1982).

Definitions

The following definitions serve to clarify terms used in the text of this investigation.

Actual subject(s) of learning refers to the actual subject(s) being taught at the time of the observation.

Analytic parameter refers to a "caterory" or "variable" selected for analysis in this investigation. Within this study it shall be referred to as AP.

Approaches to reading acquisition in this study refers

to one of the following approaches; the Experience Approach (Lamoreau & Lee, 1943), the Basal Reading Approach (Harris, 1956) and the Individualized Reading Approach (Evans, 1953; Olson, 1952). (See Approaches to Initial Reading Instruction, Chapter II, pp. 43-45 for definitions and discussion.)

Bilingual in this study refers to being able to speak two languages; English and the ethnic tongue (ET).

Biliteracy as defined in the traditional sense means the ability to read and write in two languages. In this study it refers to the ability to learn to read in English and the ethnic tongue (ET). Three types of biliteracy include language of wider communication biliteracy (LWC), traditional biliteracy (TB) and (im)migration based biliteracy (IB). LWC biliteracy is acquired from an directed towards intergroup communication. TB is used for intragroup purposes with a strong authenticity of language maintenance stress. IB is similar to LWC but has a speech community which has moved to a new environment. IB is also similar to TB but has a newly acquired, not indigenized literary tradition (Fishman et al., 1980, pp. 49-51).

Cultural congruence in this study refers to any indication of the relationship between the teachers and students that is close and caring (Cazden, Carrasco, Maldonado-Guzman, 1980).

Dimension is used in the present study in the psychometric sense, i.e., an independent source of variation common to or underlying, in this case, a group of reading acquisition process variables (Rummel, 1970).

Ethnic tongue refers to the other-than-English language being taught or used in and out of school. In this study it shall be referred to as ET.

Ethnicity of reading materials refers to materials used in reading lessons that contain themes or references to particular social group characteristics. These could include religious, linguistic, cultural, or societal references.

*Ethnography in this investigation refers to an anthropological investigatory methodology which is applied to educational settings. The educational researcher wants to understand what is occurring in the education setting, how it is occurring, what definitions of the events the participants hold about these occurrences, and what it takes to participate as a member of the various groups within and across these occurrences. The ethnographer doesn't judge what occurs. He describes what is occurring and discusses the recurring patterns of behavior (Green and Wallat, 1981, p. xiii).

Medium of communication refers to the language actually being used at the time of the protocol observation; English, ET or both.

Methods of teaching reading refers to the various analytic (from whole to part) and synthetic methods (from part to whole) described by reading researchers.

Analytic methods include the whole word method, the sentence method (Harris, 1956), and the intrinsic phonic method (Chall, 1967). With the whole word or "look-say"

method the entire word is pronounced and combined with other words to form sentences. The sentence method involves teaching the child one sentence at a time and then dividing the sentence into words (Harris p. 70). Sight reading is stressed with intrinsic phonics. Phonics is introduced later through the process of analyzing sight words (Chall, p. 103).

Synthetic methods include alphabet spelling (Harris, 1956), the systematic phonic method (Chall, 1967), synthetic word families (Aukerman, 1971), and syllabaries (Cunningham, 1975). The alphabet spelling method involves the naming of letters of a word in sequence and then the word is pronounced, e.g. "c"-"a"-"t"=K æt (kăt) (Harris, p. 69). With systematic phonics the letters of a word are pronounced and then sounds are combined into a word (e.g. "k" - " æ " "t" = kæt Chall, p. 102). In synthetic word families words are built on a base sound unit either in the beginning, medial or ending position (e.g. -æ t (ăt), f-æ-t (făt), b-æ-t (băt)). Syllabaries involve the syllable as the unit of pronunciation. Syllables are combined to pronounce words.

Protocol observations are the actual ethnographic records made by the researchers in their visits to the schools. In this study each observation is referred to as Protocol (P).

A protocol observational unit is referred to as any field note reference to the "sociopedagogy" of reading

acquisition and provided for in the analytic parameters of variables of the coding manual. In this study each observational unit is referred to as Protocol Observation (PO).

Reading acquisition refers to those skills, techniques, methods, and approches used to enable youngsters to become literate in English and ET.

Reading strategies refer to one or more schemes of having the students read. These may be either oral or silent.

Sequencing of languages is referred to as the language order in which reading acquisition skills are first taught; English-first, ET-first, or both simultaneously.

Sociofunctional refers to the dimension of ethnographic interaction that involves the functions of literacy for a particular speech community (Fishman, 1979).

Sociographic refers to the dimension of ethnographic interaction that involves writing systems (Fishman, 1979).

Sociolinguistic refers to the dimension of ethnographic interaction that involves the spoken varieties of language (Fishman, 1979).

Sociopedagogical refers to the dimension of ethnographic interaction that involves the "culture" of school related activities (Fishman, 1979).

Speaking in this study refers to vocal communication of the system of sounds (phonics) of a particular language. It refers to either letter-sound correspondence, syllable-sound,

or word-concept units.

Unobtrusive measures. In observational research unobtrusive measures are indicies of classroom interaction and other educational settings that do not require behavioral observations of a person(s) or activity. They are not susceptible to the distortion that may occur when the individual knows he is being observed (Webb et al., 1966).

In this study, unobtrusive measures refers to any "sign" of reading materials present in classrooms, hallways, lunchroom, library, auditorium, playground, church, etc.

Writing in this study refers to the formation of characters (letters, words, symbols). These characters have basic components that are either letter-sound characters, syllable-sound characters, or word-concept characters.

CHAPTER II

REVIEW OF RELATED LITERATURE

The present study was undertaken in order to explore what pedagogical and related variables are identified in the academic process of initial reading acquisition of English and the ethnic tongue. The purpose of this chapter is to provide a theoretical background for the study design and the interpretation of the data. Presented in this chapter are theory, concepts, and research for the following areas: (a) language and literacy acquisition; (b) bilingualism and biliteracy; (c) the initial reading acquisition process; and (d) social, psychological and cultural influences on the (bi) literacy acquisition process.

Language and Literacy Acquisition

The theoretical literature in the field of language acquisition is related to two major theories in the literature on learning: Behaviorist Theory and Cognitive Theory.

Behaviorist Theory rests on the belief that our knowledge originates from experience. The behaviorist position on language is based on the theory of operant conditioning and it regards language as a behavior that is learned. Behavioral linguists do not believe that humans have any innate capacities but rather believe that all learning (including language learning) is governed by the same factors which underlie all man's animal and human behaviors (Osgood, 1957; Staats, 1968). Behaviorist Theory states that the individual's language is

composed of a repertoire of skills that must be learned. The theory stresses that language behavior is a continuous process that can only be measured by the individual's observable performance. The child begins early language learning through environmental stimuli which result in direct instrumental conditioning. By means of a learned repertoire of speech patterns, the child learns to respond verbally to his feelings and sensations and learns to control his speech response. Behaviorists believe that verbal stimuli by other individuals control a person's behavior. The amount of language that is learned depends on the amount of stimulation given by others or the amount of environmental stimuli. The theory holds that a child is rewarded when his verbal responses match those produced by an authority figure. The theory also states that children learn their own language repertoire primarily through imitation of adult language.

Behaviorists do not stress language acquisition as a developmental process but as a learned process. Biological and maturational factors are not stressed or considered of much importance (Carro-Kowalcyk, 1982).

Cognitive theorists believe that a child is biologically predisposed to language acquisition because he is endowed with a "Language Acquisition Device" (LAD); hypothesized as a set of universal language categories or an innate set of structures which define the language content of the mind. Language acquisition is explained in Cognitive Theory as the child's ability to select from natural language "inputs" which he filters through LAD and builds a theory or a

generative grammar (Carro-Kowalcyk, 1982).

Chomsky (1957) stated that no sentence regardless of its simplicity can be developed without the language learner's applying basic syntatic relations. Chomsky's model also distinguishes between an individual's linguistic competence (the language he understands) and his linguistic performance (the language he uses). It proposes that competence is primary and performance secondary.

Unrelated to either of the above theories but a pertinent opinion regarding language and initial reading acquisition, is Week's (1979) belief that an early emphasis on the acquisition of reading can enrich the "total language base" (other language skills) by increasing a reader's vocabulary and by providing different opportunities for children to encounter different sentence structures in reading than in speech.

Schumann (1978), Hymes (1980) and Stubbs (1980) believe that the study of literacy is a study of the distribution of reading and writing skills and of the knowledge of their use. Literacy studies ideally combine investigations of proficiency with studies of social use. The present concern is to develop models for integrating these areas of investigation to reassess what it means to be literate.

The ethnographic approach used in the present study is more directly related to behaviorist theory in that it is concerned with observable process variables rather than with

internal processes. The process variables that were observed in relation to English and ethnic tongue reading in the present study are described later in this chapter in Initial Reading Acquisition Process (pp. 35-50).

Bilingualism and Biliteracy

The present examination of the acquisition of initial reading in English and the ethnic tongue in relation to process variables was undertaken because of lack of such previous research. The following literature on bilingualism and biliteracy deals extensively with conceptual typologies of both. The oft-used term "proficiency" with regard to both first and second languages, is seldom defined in the theoretical literature; empirical studies in these areas have operationalized proficiency as reading scores. However, the present study was not concerned with proficiency in either language, nor with whether English was the first (L_1) or second (L_2) language.

Bilingualism

According to Hamers (1981) there does not seem to be any agreement between scholars as to the definition of "bilingualism." Some scholars take the position that a bilingual person is someone who possesses some ability with one of the four skills; i.e., speaking, understanding, reading, and writing, in a language other than the mother tongue (Macnamara, 1967). Some have adapted the definition

to include the ability to speak one's own native language and another with approximately equal facility (Gudschinsky, 1970), while others have broadly defined it as the practice of alternately using two languages (Weinreich, 1953).

The literature also defines bilingualism in a number of ways depending on the relative degree of proficiency a person may have in both languages (Weinreich, 1953; Albert and Obler, 1978; Kessler, 1971; McLaughlin, 1978).

Language Proficiency and Biliteracy

Proficiency in bilingualism is no indication of proficiency in biliteracy. According to Cummins the question of how the development of first language proficiency relates to the development of second language proficiency has received little attention until recently in the context of bilingual education . He believes this lack of research stems from a failure to actually conceptualize the construct of language proficiency (1980a).

According to Oller (1978, 1979) there exists "a global language proficiency factor which accounts for the bulk of the reliable variance in a wide variety of language proficiency measures" (1978, p. 413). Cummins argues that two types of proficiency exist: one which he labels BICS (basic interpersonal communicative skills) and the other CALP (cognitive/academic language proficiency). While the former encompasses such skills as oral fluency, phonology and socio-

linguistic competence, the latter deals with those skills that are related to "reading and academic aspects of language" (Cummins, 1980d, p. 74).

Many definitions have been attached to the construct "literacy" (Barkin, 1981; Halliday, McIntosh and Strevens, 1964). One of the least vague is that of Gudschinsky (1970) who states that a literate person is one "who in a language he speaks, can read and understand anything he would have understood if it had been spoken to him; he is one who can write, so that it can be read, anything he can say". Thus, by the term "CALP" Cummins is actually referring to literacy, the knowledge of skills which go beyond the basic linguistic skills needed in speaking but which are essential to reading and writing.

Cazden (1974) also making a distinction between the skills required for speaking and listening and those required for reading and writing, uses the term "metalinguistic awareness": ". . .a special kind of language performance, one which makes special cognitive demands, and seems to be less easily and less universally acquired than the language performances of speaking and listening" (p. 29).

Cummins also regards metalinguistic awareness as one of the aspects involved in CALP. One of his main arguments for insisting that there are two types of proficiency is that while "with the exception of severely retarded and autistic children, everybody acquires basic interpersonal communicative

skill regardless of IQ or academic aptitude" not everybody is able to acquire cognitive/academic skills with the same ease (1980c, p. 101).

Types of Biliteracy and Their Functions. Fishman (1980b) defines three types of biliteracy which serve as a basis for understanding the relationship of language use and its functions. According to Fishman there are three basic types of biliteracy. These are language-of-wider-communication based biliteracy (LWC), traditional based biliteracy (TB), and (im)migration based biliteracy (IB). LWC based biliteracy is "acquired by individuals who are already literate in one ethnocultural language". It is usually the result of the expansion of econo-technical, commercial, religious, ideological or cultural establishments (p. 49) and is usually directed towards intergroup communications. Examples of languages that can be placed in this category are English, French, and Russian.

TB has been historically used for intragroup purposes with a "strong authenticity or language maintenance stress". Examples of TB can be seen in the use of two languages which are "genetically" related as Jewish biliteracy in Hebrew and Judeo-Aramaic; in Greek as Katarevusa and Demotiki; and in Chinese as Mandarin, Modern Pekingese and Cantonese (p. 50).

Some of the characteristics of IB based biliteracy include characteristics of the other two kinds. IB is "acquired from and directed towards intergroup communication"

as LWC, but has "a speech community that has moved towards a new language environment". Its maintenance stress is strong as with TB but it has a newly acquired, not native-like, literacy tradition. Both the Armenian and Greek Schools of the present study are representative of IB based biliteracy.

Spolsky (1982) believes that discussions about bilingualism or bilingual education must distinguish "the pedagogical question of how best to educate children of a particular language background from the political question of what language variety to use" (p. 142). He believes that language educational policies must recognize the "reality of literacy that exists in the community". One example of this type of difficulty is referred to in the literature as "diglossia" (Spolsky, 1974, DeSilva, 1976; Ferguson, 1959). In diglossic situations the written language is quite different from the spoken language and affects the acquisition of reading skills.

Spolsky cites a recent attempt to address this issue in the Rock Point Navajo Reservation study reported by Rosier and Holm (1980). Despite the fact that the unmarked language for oral use on the Navajo Reservation is Navajo and the unmarked language for written use is English, children in the bilingual education programs at Rock Point are taught to read and write in Navajo first. Results have shown that these children are, by the third grade, reading better in English than those who have had English from the beginning of their education. Although literacy in Navajo

was purely a means to achieving English literacy, educators have begun to use it functionally (for signs, administrative business, etc.). Spolsky anticipates that wider roles for Navajo literacy will develop so that it will not only be used as a learning medium but as a functional written language.

In relating the functions of language use to the present study Fishman (1979) stated that of the schools chosen for the study the biliteracy functional repertoire range for both the Greek and Armenian Schools were characterized by a full range for reading and writing in English but a restricted range for its ethnic tongue counterpart. In other words, literacy in Greek and Armenian ethnic day schools in N.Y.C. is primarily restricted to ethnic experiences of a religious, textual or ethno-communal nature. (1979, p. 14) Most of these and other schools representative of this type of biliteracy (Ukranian, Chinese, Japanese) "foster mastery of their own writing/reading traditions. . .whereas English is given broad range treatment" (p. 15).

Bilingual Education. Some of the major issues with regard to bilingual education are the relationship between proficiencies in first and second languages; the order in which they are learned that results in greater proficiency in the second language; and the varying objectives of types of bilingual education programs.

Proficiency in L_1 and L_2. Adversaries of bilingual education have long argued that if children for whom English is a second language are dificient in English, they need instruction in English, not in their first language, since learning in L_1 will not improve their proficieny in L_2. This argument implies that (a) proficiency in L_1 is separate from proficiency in L_2. In addition, if L_1 and L_2 proficiencies are separate, then content and skill learned through L_1 cannot trnasfer to L_2 and vice-versa. The supporters of such a model would see bilingual proficiency as two separate proficiencies (De Jesus, 1982).

Cummins states that despite its intuitive appeal, there is not one shred of evidence to support the Separate Underlying Proficiency Model (SUP) (1981).

In order to address the above problem in bilingual education, the controversial issue of when minority-language students should be exited from the transitional bilingual programs (Fishman's 1976, Type I) into regular classrooms in an L_2 dominant culture, Cummins proposed Interdependence Hypothesis of a Common Underlying Proficiency (CUP) model which sees the literacy-related aspects (CALP) of a bilingual's proficiency L_1 and L_2 as common or interdependent across the two languages and that they stem from the same underlying knowledge (De Jesus, 1982, See Figure 1, 2, 3 for illustrations, pp. 28-30).

Like Cummins, Goodman (1982) believes that there are

FIGURES 1,2,3

CUMMINS' SUP AND CUP MODELS OF BILINGUAL PROFICIENCY

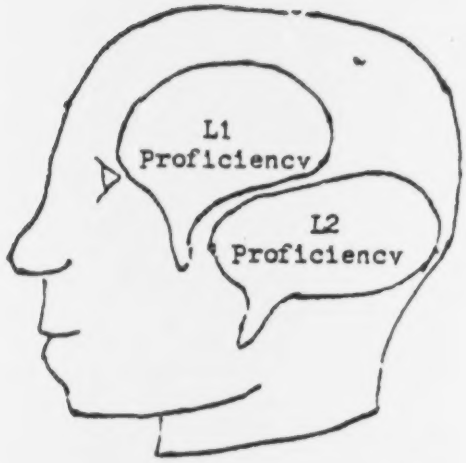

Figure 1. The Separate Underlying Proficiency (SUP) model of bilingual proficiency. (From "The Role of Primary Language Development in Promoting Educational Success for Language Minority Students" by James Cummins, 1981)

FIGURE 2

COMMON UNDERLYING PROFICIENCY (CUP) MODEL

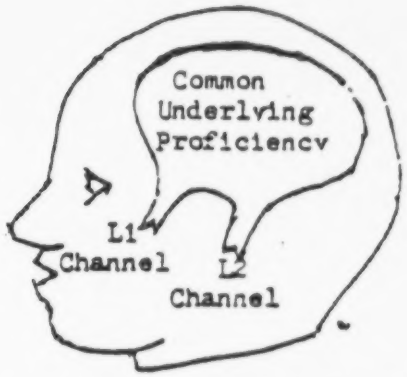

Figure 2. The Common Underlying Proficiency (CUP) model of bilingual proficiency. (From "The Role of Primary Language Development in Promoting Educational Success for Language Minority Students" by James Cummins, 1981)

FIGURE 3

DUAL-ICEBERG MODEL

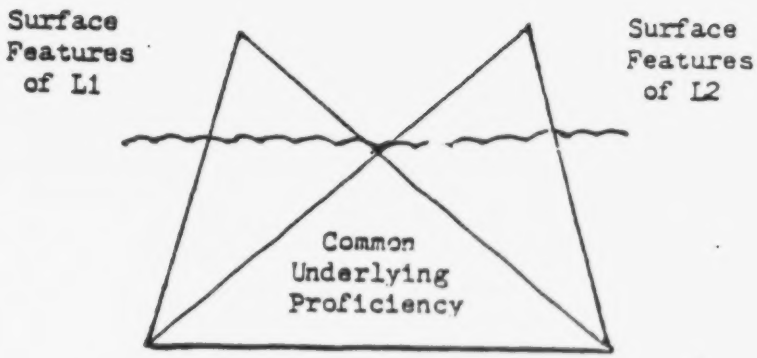

Figure 3. The "Dual-Iceberg" representation of bilingual proficiency. (From "The Role of Primary Language Development in Promoting Educational Success for Language Minority Students" by James Cummins, 1981).

psycholinguistic universals in the process of learning to read one's native language as well as reading a second language: "Learning to read a second language should be easier for someone already literate in another language, regardless of how similar or dissimilar it is" (p. 68).

There are several studies in which moderately strong correlations (r=.46 to .69) have been found between reading scores in L_1 and L_2: in Fante and English bilinguals in Africa (Bezanson and Hawkes, 1976); in English and French bilingual children in Canada (Swain, Lapkin and Barik, 1976); and in Spanish and English for Mexican-American children (Oller, Baca and Vigil, 1977).

Consistent with these findings is Fishman's (1979) hypothesis that "the major 'unknown' with respect to biliteracy acquisition may not be so much that two languages are involved instead of the more common one, but that each provides a hitherto unrecognized context for learning, using and evaluating the other" (p. 1).

Order of Learning L_1 and L_2. Some educators in the field of reading as Gudschinsky (1970) believe that a child must first become literate in his native language and then in the second language. In this way, the culture shock is minimized for the child entering school and utilizes the child's fluency in his own language in learning reading and writing skills. Once a child has developed literacy in the mother tongue, learning to read and write in the second language can follow. Nancy Modiano (1972) also supports this theory:

> Learning to read in a foreign language is far more difficult and confusing than learning to read in one already known. Youngsters who first learn to read in the mother tongue, approach reading the second language strengthened by their existing skills. Only those children whose mastery of both languages is so strong that they can fully comprehend the beginning reading materials can receive instruction in either language (p. 7).

The literature theoretically and empirically supporting simultaneous learning of both languages (Hoffman, 1969; Lambert and Tucker, 1972; Belinsky and Peng, 1974; Montoya, 1975) revolved around the issues addressed by the Lau decision with regard to bilingual/bicultural instruction, which is described in the section entitled Bilingual/Bicultural Programs on pp. 32-33.

Two studies (Skutnabb-Kangas, and Tonkomaa, 1976; Cummins et. al., 1981) relating age on arrival to immigrant students L_2 acquisition suggested that older immigrant students, whose literacy skills were better developed, acquired greater English proficiency faster than younger immigrant students.

The authors of the 1976 study suggested the following as an explanation for these findings:

> Their skills in the mother tongue have already developed to the abstract level. For this reason they reach a better level in the mastery of Swedish-language concepts in quite a shorter time than those who moved before or at the start of school, and before long surpass even the immigrant children who were born in Sweden. (p. 76).

Types of Bilingual Education Programs. Fishman (1976; Fishman and Lovas, 1970) proposed a typology of bilingual education programs based on different kinds of community

and school objectives, and suggested that various kinds of programs assume and lead to particular societal rules for the languages taught. Fishman stated that most American elementary bilingual education programs are of Type I and Type III.

> Type I: Transitional Bilingualism. In such a program Spanish is used in the early grades to the extent necessary to allow pupils to "adjust to school" and/or to "master subject matter" until their skill in English is developed to the point that it alone can be used as the medium of instruction. . .such programs. . .are basically interested. . .in arriving at the state of English monolingual educational normality just as soon as is feasible.
>
> Type II: Monoliterate Bilingualism. Programs of this type indicate goals of development in both languages for aural-oral skills but do not concern themselves with literacy skills in the non-English mother tongue. Thus such programs emphasize developing fluency in Spanish as a link between home and school, . . .but they are not concerned with the development of literacy skills in conjunction with work, government, religion or book-culture generally.
>
> Type III: Biliterate Bilingualism, Partial. This kind of program seeks fluency and literacy in both languages, but literacy in the mother tongue is restricted to certain subject matter, most generally related to the ethnic group and its cultural heritage . . .reading and writing skills in the mother tongue are commonly developed in relation to the social sciences, literature, and the arts, but not in science and mathematics. . .programs of this type are conducted by numerous American ethnic groups in their own supplementary or parochial schools.
>
> Type IV: Biliterate Bilingual, Full. In this kind of program, students are to develop all skills in both languages in all domains. Typically, both languages are used as media of instruction for all subjects (except in teaching the languages themselves). . . .From the viewpoint of much of the linguistically and psychologically oriented literature this is the ideal type of program, since. . .it results in "balanced, coordinate bilinguals - children capable of thinking and feeling in either of two languages independently (pp. 24-26).

The questions raised in the foregoing literature were not examined in the present study. Cummins (1980a) contended that "there has been relatively little inquiry into what forms of language proficiency are related to the development of literacy skills in school contexts, and how the development of literate proficiency in L_1 (first language) relates to the development of literate proficiency in L_2 (second language)" p. 27). Fishman (1977) quoted in Chapter I (p. 4); Bruck et al., (1979), quoted in Chapter III (p. 61), Haddad (1981), and Stubbs (1980) have all emphasized the lack of direct classroom observation of the process variables associated with the acquisition of initial reading skills in a bilingual classroom setting. Thus the present study was an exploratory one for the purpose of identifying those pedagogical process variables.

The Executive Summary of the Significant Bilingual Instructional Features Study (Fisher and Guthrie, 1983) focused on five ethnolinguistic groups of Limited English Proficiency (LEP) students (Mexican, Puerto Rican, Cuban, Cantonese and Navajo) in classes which represented "successful" bilingual programs, as nominated by local school and community constituents. The study further focused on programs in which English was assumed to be L_2 with "native" or "home" language being L_1, although proficiency data were not presented. Structured observations of instruction provided qualitative data on organization of instruction, allocation of time, language use, active teaching behaviors,

academic learning time, and student participation styles. The only process variable in that study that corresponded to the present study was language used:

> During basic skills instruction, English was used by instructors approximately 70 percent of the time while the students' home language was used during instruction most often to develop lesson content. The use of substantial amounts of the students' home language was associated with positive learning behaviors for LEP students (p. iii).

The following section presents background literature on the variables that were observed ethnographically in the present study; and were examined with regard to their relationships to the acquisition of initial English and ethnic tongue reading.

Initial Reading Acquisition Process

The literature focuses on two major points of view on initial reading acquisition: An emphasis on the "decoding" of print into sound via letter-sound relations, and an emphasis on getting the "meaning" from print (Carroll, 1970). This distinction is not clear cut and has for years been debated and challenged by reading researchers interested in finding the "best" method(s) for teaching initial reading in United States schools. In addition to the variables that constitute these methods, theory and research literature on initial reading acquisition has described and typed programs according to strategies, approaches, classroom organizational units, materials, and themes. It seems that the literature on these topics has not addressed biliteracy

acquisition. This section is concluded with the theoretical issue of what might be "desirable" for the initial reading acquisition process.

Reading Methods

In 1955 Rudolf Flesch released "Why Johnny Can't Read", one of the most publicized attacks on the then current views of using the sight method to teach beginning reading. His scathing criticism and denigration of the position of leading U.S. reading authorities led to two large scale reading investigation projects. These were the First Grade Reading Studies funded by USOE (1964-1967) and the Carnegie Corporation Research Project (1962-1967).

Bond (1966), director of this USOE project, indicated that no matter what the underlying method of beginning reading was, word-study skills needed to be emphasized and taught systematically. Dykstra's report (1967) on data from the project suggested that the successful "code" emphasis programs utilized both analytic and synthetic phonics instruction and might include other characteristics that accounted for their effectiveness. He urged that additional research be done to investigate what "single" or set of characteristics makes one program more effective than another.

The investigations conducted by the Carnegie Corporation Project published in 1967 by Jeanne Chall followed a variety of research approaches. Among these were

experimental studies, correlational studies, and clinical case studies.

Chall's analysis of these studies strongly favored a code emphasis over a meaning emphasis in initial reading instruction.

> My analysis of the existing experimental comparisons of a meaning emphasis versus a code emphasis tends to support Bloomfield's definition that the first step in learning to read in one's native language is essentially learning a printed code for the speech we possess....Early stress on code learning, these studies indicate, not only produces better word recognition and spelling, but also makes it easier for the child eventually to read with understanding-at least up to the beginning of the fourth grade, after which point there is practically no evidence.
>
> The correlational studies support the experimental finding that an initial code emphasis produces better readers and spellers. They show a significant relationship between ability to recognize letters and give the sounds they represent and reading achievement. Although knowledge of letters and their sound values does not assure success in reading, it does appear to be a necessary condition for success. In fact, it seems to be more essential for success in the early stages of reading than high intelligence and good oral language ability. (pp. 83-85)

Chall (1983, a) hypothesized the reading process as a set of five stages of reading development akin to Piaget's six model of cognitive development. Chall contended that it is in stages "0" through "2" that the task of decoding and mastering the print takes places.

Stage 0: Prereading; Birth to Age 6:

> .... The children grow in their control over various aspects of language - - syntax and words.

> And they gain some insight into the nature of words: . . . that they can be broken into parts, and that the parts can be put together (synthesized, blended) to form whole words . . .
>
> Stage 1 - Initial Reading, or Decoding Stage; Gradeds 1-2, Ages 6-7:
>
> The essential aspect . . . is learning the arbitrary set of letters and associating these with corresponding parts of spoken words . . .
>
> Stage 2 - Confirmation, Fluency, Ungluing from Print; Grades 2-3, Ages 7-8:
>
> . . . Although some additional, more complex phonic elements and generalizations are learned during Stage 2 and even later, it appears that what most children learn in Stage 2 is to use their knowledge . . . They gain courage and skill in using context and thus gain fluency and speed . . . (pp. 17-18)

Other recent views regarding "decoding" include those of Ehri and Wilce (1985) who believe that ". . . instruction in phonetic analysis is essential . . . The type of phonetic analysis suggested is familiarity with the names or sounds of alphabet letters appearing in spelling. Whereas phonetic analysis is viewed as central, instruction in visual processing of words is viewed as a waste of time" (p. 177).

Adams, Anderson and Durkin (1984) and Gonzalez (1984) considered the value of decoding in relation to comprehension. Adams, Anderson and Durkin believe that in order for the reading process to work, beginning readers must identify words automatically through presenting patterns of letters, not individual ones. They emphasize that "decoding" should be taught as a ". . . type of problem solving that doesn't

begin with ready-made answers but, rather seeks one out with the help of both a word's spelling and of the context in which that word is embedded." They go on to state that it is only rapid decoding that assists comprehension (p. 127).

Gonzalez's concern for the "how" of introducing nonnative English speakers to initial reading instruction in English feels that classroom teachers must assess the language proficiency of these children as well as ". . . the linguistic demands of the stories used" in order to provide sufficient preparation for them. "Otherwise, nonnative English speakers may essentially be acquiring skills of 'decoding' written language which they do not understand" (p. 450).

Smith's (1978) concepts are representative of reading researchers who are proponents of initial reading acquisition with an emphasis on getting the meaning from print. He postulates that "Learning to read does not require the memorization of letter names, or phonic rules, or large lists of words...nor a matter of application of exercises and drills...nor a child relying on instruction, because the essential skills of reading - namely the efficient uses of non-visual information cannot be taught" (p.179). He believes that reading is making sense of print and that meaningfulness is the basis of all learning. "Written words convey meaning directly; they are not intermediaries for spoken language" (p.156). He refers to the written language of Chinese where ideographs do not

correspond to any sound system, but simply represent meanings.

Smith states that the only way a child can learn to read is by being given the oppoortunity to generate and test hypothesis in a meaningful context. He must possess two insights if he is to learn to read: (1) print is meaningful, (2) written language is different from speech.

According to Carroll (1970) mature reading involves eight essential skills. The question of which order they should occur in illustrates the difference between the "decoding" advocates and the "meaning" advocates.

Order of Priorities of Reading Skills of "Decoding" Proponents

1. The child must know the language that he is going to learn to read. Normally, this means that the child can speak and understand the language at least to a certain level of skill before he starts to learn to read, because the purpose of reading is to help him get messages from print that are similar to the messages he can already understand if they are spoken. But language learning is a lifelong process, and normally there are many aspects of language that the individual learns solely or mainly through reading. And speaking and understanding the language is not an absolute prerequisite for beginning to learn to read;

2. The child must learn to dissect spoken words into component sounds. In order to be able to use the alphabetic principle by which English words are spelled, the child must be able to recognize the separate sounds composing a word and the temporal order in which they are spoken;

3. The child must learn to recognize and discriminate the letters of the alphabet in their various forms (capitals, lower-case letters, printed, and cursive). (He should also know the names and alphabetic ordering of the letters.) This skill is required if the child is to make

progress in finding correspondences between letters and sounds.

4. The child must learn the left-to-right principle by which words are spelled and put in order in continuous text.

5. The child must learn that there are patterns of highly probable correspondence between letters and sounds, and he must learn those patterns of correspondence that will help him recognize words that he already knows in his spoken language or that will help him determine the pronunciation of unfamiliar words.

6. The child must learn to recognize printed words from whatever cues he can use, --their total configuration, the letters composing them, the sounds represented by those letters, and/or the meanings suggested by the context. By "recognition" we mean not only becoming aware that he has seen the word before, but also knowing the pronunciation of the word. This skill is one of the most essential in the reading process, because it yields for the reader the equivalent of a speech signal.

7. The child must learn that printed words are signals for spoken words and that they have meanings analogous to those of spoken words. While "decoding" a printed message into its spoken equivalent, the child must be able to apprehend the meaning of the total message in the same way that he would apprehend the meaning of the corresponding spoken message.

8. The child must learn to reason and think about what he reads, within the limits of his talent and experience.

Order of Priorities of "Meaning" Proponents

(1) The child should learn the language he is going to read.

(6) The child should learn to recognize printed words from whatever cues he can use initially, but only from total configurations.

(7) The child should learn that printed words are signals for spoken words, and that meanings can be apprehended from these printed words.

(8) The child must learn to reason and think about what he reads.

(4) The child should learn the left-to-right principle, but initially only as it applies to complete words in continuous text.

(3) The child should learn to recognize and discriminate the letters of the alphabet.

(2) The child should learn to dissect spoken words into component sounds.

(5) The child should learn patterns of correspondence between letters and sounds, to help him in the advanced phases of skill.

(Carroll, 1977, 31-33)

Oral Reading Strategies

Chall (1967, 1983) found that initial reading skills were generally taught via silent reading strategies. She stated that the inhibition of oral and articulatory responses at the initial reading level retards rather than fosters the development of meaningful reading. Oral reading should be an integral part of an initial reading program.

According to Tierney et. al. (1980) the most frequent oral activity is "round-robin" or "circle" reading where "...each student in turn reads a small portion aloud...while the other students follow along silently" (p.126). Choral reading, another oral reading strategy is used as a small group or whole class activity. All the students are expected to read every line together with "proper" expression (Allen, 1976).

Two other oral reading strategies relevant to the present study include modified "echo" and individual. Echo

reading (impress method) was originally intended to expose readers to accurate, fluid reading patterns by having a pupil read the text along with the teacher (Heckleman, 1969). With the individual oral strategy, an individual student is called upon to read a portion of the text. There is no system for taking turns as in round robin or circle reading.

Adams, Anderson and Durkin (1984) question oral reading, specifically the "round-robin" strategy. They feel that the great emphasis on oral reading ". . . is undesirable because it could inhibit young readers from arriving at the understanding that reading is not saying something to another but is, instead, getting something from another" (p. 129).

Regarding the use of oral reading, Masland (1984) urges teachers of reading in multiethnic classrooms to accept and value the oral and the written language of children who are bilingual or speak with a dialect and not correct their English pronunciation while a child is reading a text orally.

Approaches to Initial Reading Instruction

The language experience approach or "experiential" approach evolved from the experience based on approaches to teaching reading of the 1930's and 1940's. (Storm & Smith, 1930; Lamoreaux & Lee, 1943). This approach involves facilitating rather than teaching children "how to learn to read". Students either individually or as a group dictate sentences or phrases for reading stories based on their needs and experiences. The teacher guides the class in

selecting the appropriate words. Other activities include the use of word banks and creative writing (Allen, 1976; Ashton-Warner, 1963; Stauffer, 1970).

The utilization of basal readers as an approach to teaching initial reading, as well as intermediate level skills, has been extensively analyzed and discussed (Austin & Morrison, 1963; Barton & Wilder, 1964, Chall, 1967). "It attempts to give teachers and pupils a 'total reading program' embodying a system for teaching reading (inthe teacher's manuals), a collection of stories and selections for pupils to read (the readers), and exercises for additional practice (workbooks)" (p.187). Barton and Wilder found that basal readers were ". . . used by 98% of first grade teachers and by 92 to 94 percent of second and third grade teachers" (1964, pp. 378-379).

Most of the basal reader series analyzed by Chall relied heavily on a whole (sight) word approach to initial reading with emphasis on "reading" pictures and on reading for meaning. They tended to introduce few new words, relied primarily on silent reading of the text, and gave only minor attention to phonic aspects.

Individualized reading programs focus mainly on the students development and not on the materials. They are based on an individual's self-interest, self-selection and self-pacing (Olson, 1949) "The teacher's task becomes to work with each student in an intensive one-to-one situation and to tailor reading programs to the specific needs of those individuals" (Tierney et al., 1980, p.195.)

Chall had difficulty describing the components of an individualized reading program because they varied considerably; sometimes incorporating basal readers and group instruction in skills from the readers or workbooks.

Classroom Organizational Units

Marita's study (1966), conducted during the period of the First Grade Reading Studies (1964-1965), attempted to look at alternatives to the previous traditional beginning reading classroom organizational patterns of whole-class, three-five group(s), and individual. Her assumption was that differences in reading ability could be better provided for within a smaller "child-centered", whole class organizational pattern.

The phases of this reading instruction would include the development of concepts and vocabulary using, a) experience stories, b) interesting stories from basal readers, c) stories adapted for use with the overhead projector, d) other related stories adapted by the teacher and deplicated for the child. A word analysis skills worksheet might be given to the class and pupils would be encouraged to work independently. In addition an independent or "individualized" reading period would follow providing a variety of activities from a child's self-selection of material to creative activities.

Chall postulated that there is a relationship between views on methods of teaching and preferences for organizational patterns (units) of reading instruction.

Basal-reader proponents tended to be in favor of within-class grouping as the major organizational pattern along with some individual instruction and self-directed activities. Most of the systematic-phonics programs favored whole-class teaching and "depend on didactic teaching-with the teacher explaining and the children practicing the sound letter relations..." (p.71).

Reading Materials, Themes, and Unobtrusive Measures

Research on the pros and cons of the diverse types, themes, and uses of reading materials in the classroom is prevalent in the literature. Two "meaning" proponents express discrepant views of the content of reading materials. Goodman (1982) believes:

> Strong semantic input will help the acquisition of the reading competence where syntactic control is weak. This suggests that the subject of reading materials should be of high interest and relate to the background of the learners...Reading materials in early language instruction should probably avoid special language uses such as literature and focus on mundane, situationally related language such as signs, directions, descriptions, transcribed conversations, etc (pp. 68-69).

Smith (1978) contends that the kinds of reading material available for use in most school classrooms is inappropriate for facilitating reading because they are based on spoken language written down, not on written language (p.185). The kinds of reading materials he finds appropriate for the classroom are coherent stories from newspapers and magazines, traditional fairy tales, ghost and adventure stories, history and myths.

Shuy (1982) emphasizes that the beginning reading matter found in basal readers or other commercially prepared materials do not have a function for the students who are forced to use them. They represent what he calls the reductionist theoreticians who claim "...that the gestault of reading can be learned best by taking natural language apart, breaking it into little artifical pieces and then gradually re-assembling it again" (p.30).

Chall observed that almost all the classes she visited used basal readers along with supplemental series and library books. The contents of these basal readers were found to emphasize familiar themes of suburban, white, well-to-do children (Chall, 1967; Waite, 1967). Chall, at that time, strongly recommended folktales and fairytales for first and second grade reading. In a recent publication (1983) she found basal readers much improved through the inclusion of both urban and suburban themes related to the lives of multi-ethnic, multiracial populations.

Masland (1984) feels that books read by youngsters in multiethnic classrooms should fit the pupils interests and be of a nonracist nature. Adams, Anderson and Durkin (1984) believe that the traditional use of stories to teach initial reading may be erroneous. The teacher's use of pictures, found in beginning reading stories, as a stimulus for reading may create an overreliance on pictures and may reduce motivation for reading the text.

Webb et al. (1966) contended that in observational research there are many unobtrusive measures of classroom interaction and other educational settings that do not require behavioral observations of persons or activities. The present study attempted to analyze "signs" of unobtrusive reading materials via their presence in the classrooms, hallways, lunchroom, library, auditorium, playground, church, etc.

Dimensions of "Desirability" of the Initial Reading Acquisition Process

The question of what constitutes "good" or "bad" reading and desirable components of an initial reading program have been mentioned in the literature. According to Weiner and Cromer (1967) much confusion exists in defining "good" reading because the reading used as criteria in research may not represent all that is meant by "good reading".

The Carnegie Research Project under Chall's leadership found "...that a code-emphasis method--i.e., one that views beginning reading as essentially different from mature reading and emphasizes learning of the printed code for the spoken language--produces better results...up to the end of the third grade" (p.307). A code emphasis should only be used until the student has learned "...to recognize in print the words he knows (because they are part of his speaking and reading vocabulary)". Her contention was that although many teachers develop methods of their own that are better than commercially published ones, "The majority of teachers

rely on published reading programs and on the manuals that have a built-in method...One has to have a method, even if it serves only as a point of departure" (p. 308).

It is Smith's (1982) belief that a "best method" for teaching children how to read and write will never exist, "...given the enormous variety in the interests and experiences of children and in the circumstances in which they will be best able to make sence of literacy" (p. 132).

The present study examined the pedagogical process variables, each one more fully described in Chapter IV, in relation to English and ethnic tongue reading as subjects of learning. "Proficiency" was operationalized to mean results in reading tests (reading scores) in previous empirical studies. Since such data were not included in the present study, these variables could only be examined in relation to what is theoretically desirable.

The present researcher's determination of what is theoretically desirable admittedly is one of personal preference. This bias has been influenced by her experience as a reading specialist, by her work with Chall on the Carnegie Research Project (1967), and by her belief in Chall's ideas (1983 a) that stress on "meaning" can occur effectively only after the code is broken. This bias is supported by the current research of Adams, Anderson and Durkin (1984), Gonzalez (1984) and Ehri and Wilce (1985). Thus, based on Chall's conclusions that a code emphasis method is more appropriate at initial reading levels and that oral reading

is essential for the initial reading process, methods and strategies representing those procedures were used to explore dimensions of "desirability" of the process of initial reading acquisition. These dimensions can be examined in the future in relation to resulting proficiency and can thus serve as a step toward the identification of "what is best".

Social, Psychological and Cultural Influences

Most of the practical situations referred to as bilingual involve factors that extend far beyond the habitual use of two languages. Reder and Green (1980) believe that literacy cannot be meaningfully defined or measured by a single set of values or needs. In a society as complex as ours, myriad influences shape the societal distribution of literacy practices as well as literacy acquisition. Both cultural and linguistic factors create complex problems for educational policy makers concerned with providing useful education which fosters educational equity and cultural pluralism.

Four major variables are considered here: setting and three of social, psychological, and cultural influences on the literacy acquisition process addressed by Schumann (1978) (See Table 1, p. 51) in his model of second-language acquisition. He believes that such social and affective factor variables as motivation, ethnic identity, and cultural congruence are essential ingredients for language acquisition.

Bilingual/Bicultural Programs

Proponents of bilingual/bicultural programs believe

TABLE 1

Taxonomy of Factors Influencing Second-Language Acquisition

Social Factors:	Dominance; Nondominance; Subordination; Assimilation; Acculturation; Preservation; Enclosure; Cohesiveness; Size; Congruence; Attitude; Intended Length of Residence in TL Area.
Affective Factors:	Language Shock; Cultural Shock; Motivation; Ego-permeability.
Personality Factors:	Tolerance for Ambiguity; Sensitivity to Rejection; Introversion/Extroversion; Self-esteem.
Cognitive Factors:	Cognitive Development; Cognitive Processes: imitation, analogy, generalization, rote memorization; Cognitive Style: field dependence, category width, cognitive interference, monitoring.
Biological Factors:	Lateralization; Transfer; Infrasystems.
Aptitude Factors:	Modern Language Aptitude; IQ; Strephosymbolia.
Personal Factors:	Nesting Patterns; Transition Anxiety; Reaction to Teaching Methods; Choice of Learning Strategies.
Input Factors:	Frequency; Salience; Complexity; Type of Interlocutor.
Instructional Factors:	Goals; Teacher; Method; Duration; Intensity.

(From "The Acculturation Model for Second-Language Learning by John H. Schumann, 1978)

that the importance of culture in teaching bilingual children is justified by the fact that the bilingual child encounters quite a number of different problems than the child who maintains English as the main language of communication in the home. The concept of culture as related to bilingual education received a great deal of attention when the vast number of children from Vietnam came to the U.S. in April 1975. Suddenly, there was a great need to learn something about Vietnamese language and culture. With the help of the Department of Health, Education and Welfare, adequate provisions were made for these children.

Joseph Montoya (1975), believes that bilingual education is a product of the "readiness" concept of learning. He feels that the child should learn to read and write in the language he brings to school with him and at the same time be introduced to English so he can learn to speak and be literate in both languages simultenously. Children who are taught in a truly bilingual/bicultural program learn better and faster in both languages. Since there are about seven million children who enter school speaking a language other than English, many studies have been done testing the reading achievement of these children. The results of the testing proved one important theory; that a child involved in bilingual/bicultural training is not in any way hindered scholastically.

Peal and Lambert (1962), in an earlier study, found in their testing of French Canadian children that bilingual

children do better than monolingual children on both verbal and nonverbal tests.

The same results were found in a Spanish/English bilingual/bicultural program by educators Balinsky and Peng who tested children from an urban school in the United States for one year (1974). Instruction was given in both Spanish and English; a half day on the same subject matter. The teachers involved were of Spanish cultural background. The children who were tested were from the first and second grades. The results indicated that by teaching in the native tongue, even the "slow learners" had normal or above normal learning scores. By providing the children with bilingual/bicultural training and teaching them in their native tongue as well, their academic achievement was high. In another test of Spanish/Portuguese children, Anderson (1974) proved that the reading program in Spanish/Portuguese can serve as a reading readiness program for English once the elements of English have been mastered.

The question of cultural differences is one of the major problems in teaching reading to children of different ethnic backgrounds. A child from another ethnic background can have difficulty adjusting to his new American environment because of his limited background and experiences in the American culture. A project was instituted at Rough Rock Demonstration School in Arizona on Navajo Indian children (Hoffman, 1969). The children were taught to read and write both in Navajo and English simultaneously. Despite

the children's limited vocabulary and cultural background, there was a noticeable achievement in their reading and writing abilities.

Language Acquisition/Learning Setting

One concern in the literature of second language learning has been related to the ideal environment for learning a second or foreign language, whether a language leraner would learn better in a formalized classroom situation or just by exposure to the language and the culture informally (without formal instruction). Krashen (1976) and Strevens (1977) distinguish between two types of linguistic environments for language learning: the formal (artificial) environment, usually found in the classroom and the informal (natural) environment, usually found in the community.

Studies have been conducted to examine the superiority of one environment over another for second language learning. Researchers such as Carroll (1967), Mason (1971) and Upshur (1968) have maintained that the use of L_2 in informal environments may be more efficient than formal study while others like Krashen and Seliger (1976), Krashen, Seliger and Hartnett (1974) have shown that students with more formal instruction are superior to those with less formal instruction on classroom-related measures of English proficiency. Nonetheless, these two studies did not take into account the possible effect of amount of exposure to English. In a study conducted to determine the possible effects of two factors,

formal instruction and one component of exposure (i.e., residence in a country where L_2 is spoken), on English proficiency, Krashen, Jones, Zelinski and Usprich (1978) found that although both factors correlated significantly with English proficiency, proficiency in English was more closely related to amount of formal instruction than years spent in an English speaking country.

Motivation

Another affective factor that has a relationship to the present study is the factor of motivation, which Schumann defines as "the learner's reasons for attempting to acquire the second language" (p. 32). Gardner and Lambert (1972) believe that there are two types of motivation for learning a second language-integrative and instrumental. "Integrative" motivation is a reflection of a willingness or a desire to be like representative members of the target language community and to become associated with that community. "Instrumental" motivation reflects a desire or a need to learn the target language for utilitarian gains (i.e., social recognition or economic advantages). A person exhibiting instrumental motives for learning a second language would probably have little or no interest in associating with or getting to know the people who speak the target language. The authors maintained that in order to be successful in the learning of a second language, the learner must have a desire to be like the members of the target language. They must have integrative motives for learning the language, such as

a desire to become associated with the community which speaks that language. Gardner and Lambert, in a study of English-speaking high school students of French, found that integratively motivated students in Canada had higher language achievement than those in the U.S. who were instrumentally motivated. Other studies relating type of motivation to language learning have not been able to establish a significant correlation (Cooper & Fishman, 1977; Johnson & Krug, 1980; Oller, Perkins & Marakami, 1980; Chihara & Oller, 1978). Cooper & Fishman (1977) in a survey of language attitude and proficiency among high school students in another L_1 dominant culture (Jerusalem) found that the students most frequently choose instrumental reasons as being among the most important ones for learning English. However, no significant correlation resulted between motivation and English ability.

Among Marathi-speaking female high school students in Bombay, India, Lukmani (1972) found that instrumental motivation was correlated significantly with English language achievement.

Oller, Baca and Vigil (1977) have found that colonized populations such as Mexican-Americans in the Southwest use antiintegrative motivation for failing to learn English. This concept can be applied to classroom settings as found in McDermott's (1976) research of the cultural interaction patterns of pariah and host groups. McDermott feels that the patters of "selective attention/inattention" (Oller et al.'s "anti-integrative motivation") demonstrated by

a child, who is representative of a pariah group (blacks, chicanos), in "school failure and deliquency often represent highly motivated and intelligent attempts to maximize his status in everyday life" which is often in direct antithesis to the school (p. 423). These anti-integration motivational patterns often result in induced patterns of inattention for reading tasks which involve a variety of conflicting codes of communication as well as behaviors. Some of the affective aspects of Schumann's model and Gardner and Lambert's integrative and instrumental motivational concepts of second-language learning are significant in understanding the dynamics involved in the biliteracy of reading acquisition of the present study.

Ethnic Identity

Some aspects of Taylor's (1977) discussion of ethnic identity in bilingualism and inter-group relations can be associated with several of the social factors of Schumann's study. In studies conducted on French and English samples in Quebec, Canada, separate patterns of identity are maintained with language, not culture, being the major factor. Taylor cites a study done with Frasure-Smith and Lambert (1975). Parents of Quebec children who sent their children to French schools identified strongly with the "monolingual French group", while those who sent their children for English language schooling identified more with bilingual French and English groups. The parents identified less with their children who they thought were closer to

the bilingual groups than they were.

In another study conducted by Taylor, Meynard, and Rheault (1977), "Two variables related to inter-group relations, that is contact and threat to ethnic identity, were the two most important factors in predicting second language ability " (p. 70). In this study when contact of French Canadians and English Canadians was high there was less fear of identity loss.

Cultural Congruence

It is of utmost importance that teachers of bilingual/bicultural children be aware of the variety in languages, customs, the whole cultural heritage, and seek to understand these children. A teacher's attitudes and predispositions toward pupils largely determines her ultimate effectiveness as a teacher. A child's academic deficiencies, for example in reading, may be attributable not to his different ethnic, cultural, and economic background, but to his teacher's response to that background.

Rincon and Ray (1975), Johnson (1975), Anderson (1974), feel that ethnic teachers are better equipped to provide a more productive learning environment in a bilingual/bicultural school setting. If a teacher is accepting of a foreign language student and his culture, the student will accept the teacher and what he teaches him in the new language. The child must not feel he is giving up his own language and culture. Gardner and Lambert (1972) indicated that the most successful second language learning takes place when

the learner feels that he is gaining something for himself rather than giving up something of himself. If a teacher tries to learn as much as he can of the language and the customs of the person he is teaching, then both the student and the teacher will have more success in learning a new language and customs. A teacher must accept the child's native language as something so valuable that the teacher himself will want to learn it.

In a decision in June 1979, Federal District Judge Joiner ordered a school district in Ann Arbor, Michigan to send their teachers back to the classroom for consciousness raising about the home dialect of poor black children because ignorance on the part of the teachers can create "psychological barriers to learning". Recently, the Connecticut Puerto Rican Coalition brought suit against the Bridgeport Board of Education for the failure of its teachers to recognize that many of the reading mistakes, made by children of Spanish speaking environments in learning to read and write English, are caused because the structures within these students' home language are different from English and interfere with the acquisition of English language skills. The Coalition believes that it is the responsibility of the Board of Education to provide teacher training in understanding these aspects of language difficulties (Fiske, 1982).

In conclusion, based on the foregoing literature and the ethnographic observations, the present study examined frequency of occurrence of English and ethnic tongue (ET)

reading as intended and actual subjects of learning; English and ET as language used (medium of instruction); methods of, strategies for, and approaches to teaching initial reading; units of in-class reading/learning activities; preparation/ sources and themes of reading materials; and unobtrusive measures. It also examined the following: the relationships of English and ET reading to the other pedagogical process variables; differences between schools and between grade levels on all variables; the interrelationships among all variables; and variables that were noted qualitatively.

CHAPTER III

METHODOLOGY

General Ethnographic Research Methodology As It Relates To Understanding Biliteracy Acquisition

A methodology which is descriptively adequate for the analysis of classroom dynamics should involve an explanation of known product data (tested assessments of academic, social, linguistic and cognitive development). Bruck et al. (p. 40) believe that process data (information on why individuals or groups perform as they do) are the description of events in the classroom which are the educational causes of the effects measured by product evaluation. The authors found in reviewing a number of process oriented Title VII evaluations that most of them did not contain generalizable statements about the processes of a bilingual education program.

> In order for these process evaluations to be of significance for the practitioner some general conclusions about what is going on in the bilingual classroom must be drawn. Educators need to know: How bilingual is a bilingual classroom? Are the models that are proposed for specific programs (e.g. alternate days, concurrent, half day pull-out) actually being followed in the classroom by teacher and pupil? Detailed information is required concerning the extent to which each language is used, as well as the conditions under which each language is used by the participants (p. 41).

Educational inquiry into a variety of cultural and linguistic factors which may promote or impede biliteracy acquisition has adopted a form of anthropological methodology

termed ethnographic investigation. It permits the researcher to look at the qualitative aspects (process data) of learning experiences rather than at a set of limited, pre-determined variables. (Cazden, Carrasco, Maldonado-Guzman, 1980; Gumperez, 1981; Hymes, 1975; Lutz, 1982 and others). Ethnographic research entails the observation of "variables" in the natural setting. The relationship of significant "variables" are not pre-determined and not controlled (Boraks, 1979).

In ethnographic research the absolute minimum number of explicit assumptions about the culture (subculture, subgroups), their attitudes, beliefs, traditions, expectations, and resultant ways of behaving are made. There is no prior determination of observational features (Rudes, Goldsamt, Cervenka, 1980, p. 91).

The researchers feel that bilingual education is well suited for the application of ethnographic methods.

> ...the application of ethnographic methods in the study of bilingual education appears highly appropriate. Generally speaking, the method is well-suited to the object of study for these and similar reasons:
>
> (a) bilingual education is a class of culturally and linguistically complex phenomena
>
> (b) bilingual education is inadequately recorded and understood by researchers using other methods
>
> (c) quantitative methods are inappropriate for areas of behavior that are context-sensitive (or where adequate measurements are lacking) as in bilingual education
>
> (d) the study of bilingual education requires a rich data base, permitting examination of complex relationships between observed behaviors and sociocultural contexts (p. 53).

The authors believe that ethnographic analyses of the phenomena of bilingual education involve a lengthy process of discovery by the participant *observer(s) through the* iteration of hunches, and hypothesis verification of behaviors and interactions in naturalistic settings (See Table 2, p.64).

Data Reduction and Analysis of Information

After the data is collected the task of sorting and distinguishing "patterns" from the ethnographic material can follow one of the various methods of analysis suggested in the literature. This can range from more qualitative narrative summaries to forms of content analyses with thematic or pre-assigned categories that "fit".

Rudes et al., suggest that the merging of qualitative and quantitative data analysis can work together to gain an improved understanding of categorical processes. "Quantitative approaches can benefit a great deal from rich descriptions of classroom and school processes as working toward the goal of providing more convincing casual models of the process of schooling. Qualitative studies can benefit from quantitative concerns for reliability and validity" (p. 46). This can be done in one of three ways: (a) The ethnographic study is used as a prelude to quantitative study. (b) Both types are used concurrently with a methodological separation of the two methods. (c) Both types are merged and used concurrently (p. 69).

TABLE 2

Some Basic Differences Between Conventional and Naturalistic Inquiry

	FORMS OF INQUIRY	
	Conventional Inquiry	Naturalistic Inquiry
Philosophical base	Logical positivism	Phenomenology
Inquiry paradigm	Experimental physics	Ethnography; investigative journalism
Purpose	Verification	Discovery
Stance	Reductionist	Expansionist
Framework/design	Preordinate/fixed	Emergent/variable
Style	Intervention	Selection
Reality manifold	Singular	Multiple
Value Structure	Singular	Pluralistic
Setting	Laboratory	Nature
Context	Unrelated	Relevant
Conditions	Controlled	Invited interference
Treatment	Stable	Variable
Scope	Molecular	Molar
Methods	Objective - in sense of inter-subjective agreement	Objective - in sense of factual/confirmable

Guba, E. Toward a Methodology of Naturalistic Inquiry in Educational Evaluation. (1978)

Development of Coding Frameworks

The ethnographic researcher can decide to utilize a more quantitative approach to data analysis by developing a coding scheme. The two basic types of coding schemes suggested in the literature are scalar and typological. "The first grouping is some form of scale, continuum or rank order with which units are assigned" (Rudes, p. 41). The typological approach requires the development of categories or variables that emanate from the data and from the ethnographer's prior knowledge of the research and literature in the field. (See Appendix I (p.209) for Rudes' translation of an Inventory of Variables Relating to Bilingual Classrooms by Mackey, 1976.) The categories can be mutually exclusive or can take the form of multiple response categories:

> Since the initial coder may be biased by a predetermined hypothesis or orientation...these coding attempts should be independently checked by using another coder who lacks the pre-determined feel for the model or prior hypothesis. Coding rules in general should be made explicit, and be presented with the findings developed on the basis of the coding activities (p. 43).

The analysis of the data for the present study utilized both a qualitative and quantitative approach. The quantitavive analysis of the date followed the coding procedures suggested in the ethnographic research literature as discussed in this section. The qualitative analysis took the form of a descriptive analysis of the "emic" (internal) dynamics found in the ethnographic observations of the study.

Specific Methodology of this Study

Presented in this section are a description of the study population and sample; the general procedures employed in collecting the data; the procedures used in preparing the data for analysis; and the procedures, both qualitative and quantitative, that were used in the analyses.

The Sample

The two schools selected for the present study (The Holy Martyrs, Armenian School and St. Spiridons, Greek School) were two of the five non-public New York City schools included in a prior study (Fishman, Riedler-Berger, et.al., 1982). Although randomly selected, these five schools were considered to be"...rather typical of the universe of some 1500 minority ethnic community all-day schools in the United States today" (Fishman, 1980). "They are sponsored by the local ethno-linguistic communities throughout the country and are associated with an ethno-religious tradition" (Fishman et al. Final Report/Part 1, 1982, p. 2). The two schools focused on in the present study, The Armenian and Greek, had been selected by Fishman (1980, p. 51) to exemplify an (im)migration based biliteracy tradition[1]. They also evidenced similar biliteracy repretoire ranges in connection with reading and writing (Fishman, 1979, pp. 13-16)[2]. These

1. See Review of Literature, pp. 24-25
2. See Review of Literature, p. 27

schools drew their support and student populations from the "middle-class" in regard to socio-economic status and in standards of attainment. The population consisted of students who were mostly (at least 80%) native born, English dominant, and from bilingual speaking and most biliterate homes. The teaching and administrative personnel also tended to be predominately bilingual and biliterate (Fishman et al., 1982).

Since the present study was concerned with the initial acquisition of biliteracy in English and the ethnic tongue, the sample in the major analysis was delimited to protocol observations* made in the nursery/kindergarten, first, and second grades of the two schools. These included six out of ten classes in the Armenian School and five out of seventeen classes in the Greek School. The majority (58.5%) of the protocol observations (PO's) were obtained from the first grade, the fewest from nursery/kindergarten (16.5%). More of the PO's were classroom observation protocols (78.0%) than interviews (22.0%).

Class Size

The class sizes for the Armenian School for the first year of the study (1979-1980) were identical for both English and the ethnic tongue classes: Nursery, 15, kindergarten, 19; first grade, 10; second grade, 17; third

*Protocol observation (PO) was the case or unit of analysis; it is fully described in Coding and Inter-rater Agreement on pp. 75-77. Criteria for inclusion of cases in either the major or the minor analyses are described in Statistical Procedures on pp. 81-83.

grade, 18. Although the exact number of students for the nursery and kindergarten for the second year of the study (1980-1981) was unknown, it approximated the first year. The first grade had 16 students in both English and Armenian classes, while the second grade had nine students in the English class and 16 students in the Armenian class (seven of the latter were from the fourth and fifth grades).

The class sizes for the Greek School for the first and second year of the study were the same for both the English and ethnic tongue classes. The class sizes for the first year were: kindergarten, 25; first grade, 28; second grade, 25. The class sizes for the second year were: kindergarten, 25; first grade, 37; second grade, 25.

It is of interest to note that the Greek School experienced much larger class sizes for all grade levels for both years of the study. The first grade in particular had more than twice the number of students as the Armenian School.

Class size was used as a variable in an exploratory multivariate analysis.

Time Allotted for Teaching Language

The time scheduled for teaching the ethnic tongue in the primary grades of the two schools in the study were as follows:

1. In the Armenian School - one period (45 mins.) two to three times a week in Nursery and kindergarten;

one to two periods (45 mins.) daily for first and second grades.

2. In the Greek School - one period (45 mins.) daily in the kingergarten (starting in Dec.); two periods (45 mins.) daily, four days a week, and one period one day a week (six and three-quarter hours weekly) in the first and second grades.

However, these times were not consistent, and actual time was not noted in the protocol observations. Therefore, this factor was not included in the study analyses.

The remainder of the school day was spent on teaching English related skills which included language arts, social studies, mathematics, science, art, music and physical education.

Sequence of Language Being Taught

Except for less time being allotted during a school day for instruction in the ethnic tongue, (ET) instruction in both English and ET began at the start of the school year in the Armenian School. This was not the same for the Greek School where formal instruction in the ethnic tongue did not begin until December in the kindergarten ("after a foundation in English is established"). However, instruction in both languages in the first and second grade began in September of the school year.

Time of Year

"Time of Year" was examined as a factor in the study anal-

yses. The greater number of protocol observations were obtained in the earlier months of the two academic years spent on the study (50.6% for September-December school visits) with more PO's for the Greek School (64.1%). The middle period of school data collection included more PO's in the Armenian School (48.8% as compared to 34.6% in the Greek School for January-March visits). The least number of PO's were obtained in the later part of the year (7.4% from April-June).

Data Collection

Since the present study was a further analysis of the already collected data of the Fishman, et al. study of 1979-1982, the procedures for collecting and analyzing the data for the original study are briefly described here. This is followed by a description of the methods employed in selecting and preparing the data for analysis of the current study.

The initial study involved the participation of a research team composed of the principal investigator and two research assistants. Members of the team were encouraged to visit all the five original project schools (Armenian, Chinese, French, Greek, and Hebrew) for the purpose of collecting data via ethnographic observation of and interaction with all relevant segments of the school/community complexes that might influence the acquisition of biliteracy.

The study was projected to run for the two year period 1979-1981 with sixty-eight visits of roughly a day each (two visits per week for thirty-four weeks) scheduled for the first year and thirty-four additional visits (one visit per week for the second year). The remaining eight weeks of year "1" were to be utilized for tentative write-ups and interpretations as well as for the generation of questions that required consideration during year "2". The final eighteen weeks of year "2" were set aside for the preparation of the final study report.

From October 1979 until late Spring 1980, the research staff regularly visited the project schools. They focused upon four theoretical interactive dimensions ("sociofunctional, "sociopedagogical", "sociolinguistic", and "sociographic") as guides for reports. For each visit to each class each member of the team was required to report her observations or interviews with careful consideration to describing "exactly" what was observed. All of the observers' own impressions were so noted in the reports. Each of these reports was called a Protocol. (See Appendix II for sample protocol, p. 212) Each protocol was subsequently divided into observational units, called Protocol Observations (PO's). (See Coding and Inter-rater Agreement pp. 75-79). The Protocol Observations were used as "cases " in the original and in the present study.

Within the schools themselves, the research staff gathered data from the administrators, teachers, and

students. In all the settings copies of relevant published materials (textbooks, teachers' guides, curricula, newsletters, secular and religious texts, etc.) were collected. In addition to school based data, home-and-community based data via interviews with parents and community leaders were collected using non-obtrusive and participant observation means. Parental data was also forthcoming via attendance at P.T.A. meetings and other school events.

Regular observations continued during the first part of the second year of the study (1980-1981), with fewer visits to the schools as the year progressed. The proportion of time devoted to studying the data contained in the observers' notes on school/community visits increased. Matters that seemed unclear or unsettled on the basis of initial observations were looked at again with the careful avoidance of drawing any conclusions from the data.

The issues of reliability and inter-year stability were addressed during the first half of the second year (Sept. 15, 1980-March 15, 1981) of the study. It was of utmost importance in ethnographic research of this nature to determine whether the field workers agreed on the data being collected (inter-observer reliability) and whether this agreement was maintained from one year to the next (stability of the data) (Fishman et al., Second Quarter/Second Year, 1981; Sullivan, 1979; Rudes et al., 1980). Fishman's conclusions were that ". . .inter-observer reliability was

at the vey highest level, at least two observers being involved and intimately familiar with each and every school." He also concluded that ". . .inter-year stability, although clearly substantial, is nevertheless of a lower order than inter-observer reliability" (Fishman et al., 1981, p. 2). Inter-year stability suffered somewhat from the fact that one of the original project schools dropped its ethnic language component and the Greek School experienced a major increase in class size due to increased immigration and fiscal stringencies.

The third quarter of the second year of the project (March 15, 1981-June 15, 1981) was used for filling in gaps in the data. All protocols spanning a year and one half of data colection were reviewed by both field workers and passages that needed clarification were noted. The final visits to the schools focused on clarifying, amending or supplementing the orignal protocols. In mid-June, letters of thanks were sent to the cooperating schools. In the Fall of 1981, several additional visits were made to some of the schools to tie up "loose ends".

Data Analysis of Original Study

Analysis of the data for the Fishman et al. study was presented in two parts. The first part (Feb., 1982) was qualitative, based on the impressions, reflections, and discussions of the members of the research team. The second part was quantitatively described (August, 1982) by

utilizing frequencies and percentage tabulations for the codified protocol observations by language, school, and grade.

These quantitative analyses revealed greater variability occurring in the "(socio)pedagogical" dimension with a greater emphasis on reading than on other language skills. Those authors suggested additional research to further clarify this dimension, specifically a reanalysis of the data with more precise definitions of variables and coding of categories, to rater reliability, and to intercorrelations among variables. The present study analyses were an attempt to execute those suggestions.

Data Analyses of the Present Study

The current investigation was a further analysis of the data collected for the Fishman et al. study. The original data for two schools, Armenian and Greek, were analyzed in greater detail focusing on "(socio)pedagogical" variables that might be related to initial reading acquisition in English and the ethnic tongue.

The general research questions for the present study (found in Chapter I) evolved in the following manner. This researcher reread both the research findings and all the observation reports (protocols) gathered over the two years of the previous study. During this rereading process she compiled a rough list of questions that might be addressed in the present study. This list was then compared to the questions that had been used as a basis for the observations

and interactions of the previous study, as well as those that evolved from that study. The researcher also reviewed pertinent literature on biliteracy acquisition, on the ethnography of biliteracy and bilingualism, and on initial reading acquisition for additional questions that could be examined using the existing data.

The research questions suggested a preliminary set of 29 pedagogical and reading acquisition variables; 14 "analytic parameters" (see Appendix III, p.216) from the previous study and 15 generated by the present research (see Appendix IV, p. 219). Some of the variables consisted of mutually exclusive categories. Other variables, such as "Methods", were actually groups of items that could occur independently (These variable group items are enumerated later in the chapter in Statistical Procedures pp. 81-83).

Coding and Inter-rater Agreement

A Protocol Observation Coding Form (POCF) was constructed that incorporated specific criteria for operationalizing these additional variables. (The POCF is presented in Appendix VI, pp. 227-242.)

In order to assess the adquacy of the coding form, the researcher (Rater #1) and two independent raters used the POCF to code ten protocols, five from each school, that the researcher selected for diversity and representativeness of their content. (See Appendix V, p.226 for Backgrounds of Raters #2 and #3. The raters went through two protocols

(other than the ten to be coded) together, discussing criteria in relation to the actual protocol content using the Protocol Observation Coding Form (POCF), which was supplemented by the following: 1) Directions for Analyzing the Protocol Observation Coding Forms; 2) An index for the POCF's; 3) An official list of faculty designations for the Armenian and Greek Schools for the academic years 1979-1981; 4) A list of class sizes for the Armenian and Greek Schools-1979-1981; 5) A list of reading materials used in the Armenian and Greek Schools for 1979-1981; and 6) Separate notation sheets for Protocol Observations.

Excluding Items 1 (PN: Protocol Number), 2 (PO: Protocol Observation), 3 (School), 4 (Date of Protocol), and 6a (Number of Children in Class) the form contained 86 possible categorical or dichotomous items for each Protocol Observation (PO). It was necessary for raters to identify each separate observation within a protocol, as well as to code the content of that observation. An observation (PO) was defined on the coding form and in the directions for the raters as "(a) each distinct activity, (b) each of several activity groups, (c) each distinct subject in an interview." Thus rater agreement was calculated for identification of the PO's and for coding the content of each PO.

PO Identification. Given the descriptive material constituting an entire protocol, the three raters did not always consider identical segments of the material as the same PO when using the stated criteria. The researcher then examined

the nature of the disagreements. These disagreements had to do with lack of clarity in the directions for identifying distinct PO's, specifically regarding (1) the introduction of new material within the same activity, (2) material to be considered "non-applicable", and (3) teacher activity.

The researcher then revised the criteria to discriminate more specifically the "correct" identifications, i.e., those which corresponded to her intended distinctions for PO's. The revised criteria for identifying a PO were:

A new protocol observation (PO) was created for:

(a) Each distinct intended subject of learning whether observed or described in an interview. (Activities that are not related intentionally or actually to reading acquisition are considered non-applicable-(N/A) - and are not to be coded.)

(b) Change in site of activity observed or described.

(c) Change in people doing activity (not including parallel subgroups)

(d) Change from material used in intended subject of learning to unobtrusive materials.

The researcher then compared the three raters' identifications and used the clarified criteria for a distinct PO to determine which PO identifications were "correct". In the ten protocols there were 62 PO's and therefore 186 possible correct identifications across the three raters (3x62), 141 (76%) of which were correct. Table 3 (p. 78) presents the possible correct and percent correct PO identifications by protocol, for each of the three raters and for each protocol across raters. The three individual raters correct PO identifications were 77%, 74%, and 75% ranging from 45% to

TABLE 3

CORRECT PO IDENTIFICATIONS

		By Rater			Across Rater	
		Rater 1	Rater 2	Rater 3		
Protocols	Possible	n (%)	n (%)	n (%)	Possible	Total
1	10	10 (100)	5 (50)	10 (100)	30	25 (83)
2	10	8 (80)	8 (80)	6 (60)	30	22 (73)
3	6	6 (100)	3 (50)	5 (83)	18	14 (78)
4	11	5 (45)	9 (82)	5 (45)	33	19 (58)
5	5	5 (100)	5 100	5 100	15	15 (100)
6	2	1 (50)	1 (50)	1 (50)	6	3 (50)
7	6	4 (67)	6 (100)	4 (67)	18	14 (78)
8	6	4 (67)	4 (67)	6 (100)	18	14 (78)
9	2	1 (50)	1 (50)	1 (50)	6	3 (50)
10	4	4 100	4 (100)	4 (100)	12	12 (100)
TOTAL	62	48 (77)	46 (74)	47 (75)	186	141 (76)

to 100% on individual protocols. Correct PO identifications across raters for the ten protocols ranged from the lowest of 50% on Protocols 6 and 9, 58% on Protocol 4 and 73% to 100% on the remainder. Two protocols having the lowest by-rater and across rater percent of correct PO identifications, Protocols 6 and 9, were resubmitted to two raters (Rater #2 was unavailable) for identification of PO's and coding of PO content (see following section), using a new POCF i.e., the clarified PO identification criteria and revisions in item coding. The two raters agreed 100% on the identification of the PO's in each protocol.

Item coding. In order to compute percent of agreement among three raters on coding of the content of identified PO's their coding was compared item by item, rater #1 with rater #2 and rater #3, and rater #2 with rater #3. Percent of agreement between raters on PO items is presented in Table 4 (p. 80), by protocols, for each pair of raters and across raters. (There were 86 items to be coded for each PO; percent of agreement was computed only for PO's correctly identified by pairs of raters. Mean percent of agreement for a total of 117 PO's (10062 items) coded was 90%. Mean percent of agreement between raters #1 and #2, #2 and #3, and #1 and #3, respectively, were 88% (39 PO's), 87%(35 PO's) and 93% (43 PO's). The lowest percent of agreement (84%) was between raters #2 and #3 on 3 PO's in Protocol #9.

Criteria for item coding were made more specific and/or discrete on the basis of the disagreements. The addition of

TABLE 4

PERCENT OF AGREEMENT BETWEEN RATERS

FOR PO CONTENT CODING

Protocol Numbers	Rater 1 w/ 2		Rater 2 w/ 3		Rater 1 w/ 3		Across Raters	
	n of (a) paired PO's	% of agreement for total n of items (b)	n of (a) paired PO's	% of agreement for total n of items (b)	n of (a) paired PO's	% of agreement for total n of items (b)	Total PO's pair wise	% of agreement for total n of items (b)
1	5	87	5	89	10	93	20	90
2	8	90	5	89	6	95	19	91
3	3	88	2	85	4	92	9	90
4	5	87	5	87	5	93	15	89
5	5	88	5	90	5	95	15	91
6	1	92	1	90	1	98	3	93
7	4	86	4	87	4	90	12	88
8	3	86	3	87	3	93	9	88
9	1	86	1	84	1	92	3	90
10	4	90	4	87	4	95	12	91
Total	39	88	35	87	43	93	117	90

a. % agreement was computed only for PO's correctly identified by both raters.
b. 86 items per P.O.

80

96

97

"intended subject of learning" as a criterion (as well as coding errors in relation to the original Item #9 -("intended subject of instruction") necessitated definitions of the terms "intended subject of learning" and "actual subject(s) of learning". These definitions (and those for "reading", "writing", "speaking", and "language in general", originally included in the coding form) were specified in the revised directions. Other changes in the POCF included the reordering and reformating of items to improve their clarity, a few minor changes in the wording of items, and the addition of coding categories for some items. The revised Directions, Index of Items for Referral and POCF are presented in Appendix VII, pp. 243-255.

Revised POCF and Inter-Rater Agreement. The revised POCF, which included the clarified PO identification criteria and the foregoing clarifications for item coding, contained 98 items. On the protocols (#6 and #9) which were resubmitted to the two raters, rater agreement on the 4 individual PO's ranged from 90% to 98%, with a mean of 94% across the 4 PO's (392 items). These results were considered as an indication that revised PO identification criteria were satisfactory and the coding of all data was done.

Statistical Procedures.

The total number of protocol observations or cases identified was 244. These observations were divided into two groups which were analyzed separately. The first group, hereafter called the major data group, included all PO's which

met the following criteria: (1) nursery/kindergarten, first or second grade, (2) classroom and (3) observation or interview. There were 164 such observations. Because observations for levels above the second grade were few and/or nonspecific, they were excluded from the major data group. In-school/out-of-classroom and out-of-school observations were few in numbers and therefore were also excluded, as were observations with unspecified site or observation of unobtrusive materials. All observations excluded from the major date groups were included in the so-called minor data group (n=80).

Frequencies for all study variables were computed for the major data group. All data were categorical. A few of the variables were coded using mutually exclusive multiple categories: "Intended subject of learning," "Language of intended and of actual subject(s) of learning," and "Theme(s) of reading/learning materials." The remaining groups of variables were not mutually exclusive, i.e. more than one could occur in any given PO, and each item in the following variable groups was coded dichotomously as present or absent: "Actual subject(s) of learning," "Methods of teaching initial reading skills," "Reading stategies," "Units of in-class reading activity," "Approaches to initial reading/learning," and "Preparation/source of material used for reading." ("People other than day school teachers and students," and "Unobtrusive measures of language/reading materials" did not occur in the major data group.) If a PO had at

least one of the items in a given variable group noted as being present or occurring, all items for that variable group were coded present or absent. If none occurred, the entire group of items was coded as missing i.e. absence of all items in a group was never inferred.

Aside from the discrete coded variables, several composite variables were created to represent conceptually grouped combinations of occurrences for "Actual subject(s) of learning (skills and language/skills combinations)", "Methods of teaching initial reading skills," and "Reading strategies" combinations.

In addition to frequency distributions, the following analyses were performed for the major data group only:

1. Comparisons between schools and between grade levels were made on selected variables using Chi Square Tests of Homogeneity.
2. The relationships among pairs of subcategories of variables were examined using cross tabulations and Chi Square Tests of Independence. Phi coefficients were used as indicators of the strength of relationships between pairs of variables.
3. Exploratory multivariate analyses - multiple regression and factor analysis - were performed on a selected subset of variables in a selected subset of observations to examine the interrelationships among study variables.

Revised Research Questions

The research questions presented in Chapter I served as guidelines for the organization and coding of the ethnographic data on reading acquisition in English and in the ethnic tongue (ET) and on the associated pedagogical variables. Significant results from the analyses described above suggested relationships and emphases more specific than the original broad ethnographic questions. The following revised questions served to organize the presentation of results (question numbers correspond to the order of presentation in Chapter IV):

1.1 to 9.1 To what extent did the following variables occur across the sample:

- 1.1 English and ET reading acquisition as intended and/or actual subject(s) of learning?
- 2.1 English and ET as language used (medium of learning)?
- 3.1 Nine methods of teaching initial reading?
- 4.1 Six strategies for teaching initial reading?
- 5.1 Four approaches to teaching initial reading?
- 6.1 Four units of in-class reading/learning activities?
- 7.1 Ten preparations/sources of reading materials?
- 8.1 Seven theme categories of materials used for reading/learning?
- 9.1 Eight unobtrusive measures of reading/learning materials?

2.2 to 8.2 How did the following relate to English and ET

reading acquisition:

2.2 English and ET as language used (medium of learning)?

3.2 Nine methods of teaning initial reading?

4.2 Six strategies for teaching initial reading acquisition?

5.2 Four approaches to teaching initial reading?

6.2 Four units of in-class reading/learning activities?

7.2 Ten preparation/sources of reading materials?

8.2 Seven theme categories of materials used for reading/learning?

1.3 to 8.3 Did schools and grade levels differ on the following variables:

1.3 English and ET reading acquisition as intended and/or actual subject(s) of learning?

2.3 English and ET as language used (medium of learning)?

3.3 Nine methods of teaching initial reading?

4.3 Six strategies used for teaching initial reading?

5.3 Four approaches to teaching initial reading?

6.3 Four units of in-class reading/learning activities?

7.3 Ten preparation/sources of reading materials?

8.3 Seven theme categories of materials used for initial reading/learning?

10.0 How do reading acquisition and pedagogical variables interrelate with one another, i.e.:

10.1 What variables best predict the occurrence of a constellation of methods and strategies emphasized by Chall?

10.2 What are the dimensions underlying the reading acquisition and pedagogical variables?

11.0 What were the most prominent of the variables that were observed qualitatively?

CHAPTER IV

FINDINGS

In the foregoing chapter descriptions of the study sample, data collection and coding, and data analyses were presented. Given the large number and the several types of variables examined, and the several approaches used in analyzing the data, data analyses were quite extensive. In order not to burden the reader with a lengthy recitation of non-significant findings the researcher opted to present only significant findings in this chapter. This presentation, following a brief summary of the study and the methodology, is ordered by the questions listed at the end of Chapter III. Thus, the present chapter includes the statistics for frequency of occurrence of English and ET reading, and of the pedagogical variables; or significant relationships of English and ET reading with the pedagogical variables; for significant differences between schools and between grade levels on the reading and pedagogical variables; and for multivariate analyses among the study variables. The quantified findings are followed by a presentation of qualitative findings.

The findings presented in this chapter are summarized and discussed in Chapter V with conclusions and implications for initial reading acquisition and educational administration, and suggestions for future research.

Study Summary

The present study, a further analysis of the Fishman et. al. study (1979-1982), focused on the relationship of

pedagogical variables to initial reading acquisition in English and ET, in two schools representative of the same biliteracy tradition. A second concern was to examine differences between the two schools and between grade levels, on initial reading acquisition and on the pedagogical variables. Additional analyses explored interrelationships among variables.

The schools examined in the present study (Holy Martyrs, Armenian and St. Spiridons, Greek) were selected for the Fishman study as "rather typical of the universe of some 1,500 minority ethnic community all-day schools in the United States today" (Fishman, 1980b). They were considered representative of an (im)migration based biliteracy tradition (Fishman, 1980, p. 51) and evidenced similar biliteracy repretoire ranges in connection with reading and writing. Since the present study was concerned with initial biliteracy acquisition in English and the ethnic tongue, data from only the primary grades in each school were examined.

The ethnographic observations from which the present data were derived had no predetermined "variables." The use of quantitative analyses of the data necessitated the development of a Protocol Observation Coding Form (POCF) that operationalized reading acquisition and the pedagogical variables suggested in the broader research questions. Percent of rater agreement averaged 79% for the identification of protocol observations (PO's) within ten protocols and 90% for coding the content of each PO.

Frequencies of occurrences for variables were computed separately for the major data group (Protocols from In-class, Nursery through Grade 2). Two tests of significance were performed on the major data set: chi square tests of homogeneity of school and of level on all variables; and chi square tests of independence of pairs of variable group (e.g. "Methods of teaching initial reading") items described in Chapter III. Multiple regression and factor analysis were also carried out in an exploratory attempt to achieve a more parsimonious and comprehensive view of variables of major interest. These analyses were supplemented by descriptions of qualitative variables.

Each findings section is introduced by the revised questions that evolved from the above analyses and enumerated at the end of Chapter III. Statistical tables for each section appear at the end of the section. The reader is reminded that a discussion of the meaning of these findings is elaborated in Chapter V; this should be considered especially with regard to findings of differences between schools, as such differences do not necessarily influence across sample findings.

1. Reading Acquisition

1.1 To what extend did English and ET reading occur across the sample: as intended subjects of learning, as actual subject(s) of learning, and in combination with other subjects?

The reader should bear in mind that the ethnographic

observations (Fishman et. al., 1982) on which the data in the present study were based, were planned for the purpose of observing the acquisition of biliteracy in bilingual/ bicultural classes. The present study focused particularly on the initial reading acquisition process. Thus, the observations were not representative of an entire curriculum because non-language activity observations were only incidental. Other language skills are discussed here only in relation to reading.

The occurrence of "English reading," "ET reading," and "other language acquisition skills" was represented by several variables: intended, actual, and in combination. "Intended subject of learning" was coded as one of 12 mutually exclusive categories. The frequencies for this variable are presented in Table 5 (p.96) by school and for the total group. The most frequently occurring intended subjects of learning were "English reading" (22.6%) and "ET reading" (21.2%). Frequencies of the other language related acquisition skills (speaking, writing, and language in general) combined as intended subject(s) of learning were 28.1% for the ethnic tongue and 15.1% for English.

There were similarly 12 possible "Actual subjects of learning", but because more than one subject could occur in the same observation, these subjects were coded as 12 dichotomous variables, i.e. occurred or did not occur. (The frequencies for these subjects are presented in Table 6, (p.97).

The most frequently occurring actual subject was "Ethnic tongue reading" (34.1%). "English reading" was second most frequent (32.9%) followed by "Ethnic tongue language in general" (28.0%). All other subjects occurred in less than 20% of the PO's. Compared to the occurrences for other actual subject(s) of learning involving the use of English and ET, i.e. writing, speaking, and language skills in general, reading of both English and ET occurred to a greater extent than writing (English, 15.9%; ET, 18.3%), or speaking (English, 12.8%; ET, 18.9%) or language skills in general (English 14.0%; ET, 28.0%). These data are consistent with Fishman et. al.'s findings that reading is given more attension than writing or speaking. It would appear that the schools pursue a traditional reading/writing stress relative to biliteracy acquisition in the grades under study.

Two variables were created that represented mutually exclusive categories of combinations of the 12 "Actual subjects of Learning": a "skills composite" and a "skill by language" composite. For the composite for "skills of actual subject(s) of learning" (Table 7a, p.98) the majority of occurrences were in the category "Reading with other language related and non-language skills" (42.7%). "Non reading/other language and non-language skills" was the second most frequent (26.2%) and "Reading only" (22.0%) occurred next. "Language and skills of actual subject(s) of learning" (Table 7b, p.98) was a composite variable similar to the one previously described. However, in this composite

variable the skills were broken down by language. The predominant skill was "ET reading and other language skills but no English skills" (23.2%). The reading of English and of ET occurred with other language skills (English, 17.7%; ET, 23.2%) more than did reading alone (English, 12.8%; ET 8.5%).

In summary, the foregoing findings indicated that as independent acutal subjects of learning, the reading of English and of the ethnic tongue occurred to a similar extent (English, 32.9%; Et 34.1%). The intended subjects of learning for reading English and reading ET also occurred to a similar extent, although reading as an intended subject was found to occur to a lesser extent (English, 22.6%; ET, 21.3%) than reading as an actual subject did. This finding suggests that reading actually occurred when other subjects were intended, rather than, as Fishman et. al. suggested (Final Report, Part II, 1982, p. 8), that writing occurred for the purpose of reading. However, his data were not recorded as "intended" or "actual" subjects.

1.2 Did the schools and grade levels differ on English and ET reading acquisition?

Chi square tests of homogeneity revealed significant differences among schools on two of the reading acquisition variables (The contingency tables for these differences are presented in Table 8, p.99). The two schools differed significantly on English reading as an "Actual subject of learn-

ing "(Table 8a, p. 99) (X^2_a=5.14, df=1, $p \leq .05$). The Greek School had a disproportionately greater occurrence of English reading (42.3%) compared to the Armenian School (24.4%). The schools also differed significantly on the composite variable "Skills of actual subject(s) of learning" (Table 8b, p. 99) (X^2_b=11.37, df=3, $p \leq .05$). The Armenian School had a disproportionately greater occurrence of non-language skills (16.3%) compared to the Greek School (1.3%).

It is possible that the reason for the greater occurrences of English reading as "Actual subject(s) of learning" in the Greek School may be attributable to the fact that the "formal" teaching of ethnic tongue literacy related activities does not start until the middle of the kindergarten year, ". . .after the foundation is set in English".

In regard to the greater occurrences of non-language skills for 'Skills of actual subject(s) of learning" at the Armenian School, it is difficult to draw any conclusions as the study was planned to observe biliteracy acquisition, and non-language skills activities were observed only incidentally.

There were no significant differences found among grade levels on reading English and on reading ET as subject(s) of actual learning.

There was one variable - "Intended subject of learning" - that differed significantly in both the by-school (X^2_a=19.09, df=5, $p \leq .01$) and the grade-level analyses (X^2_b=19.10, df=1, $p \leq .05$) (Tables 9a and 9b, p. 100). English reading, as

an intended subject of learning, occurred to a greater extent in the Greek School (32.1%). There were more instances of "Non-ET/non-language intended subjects of learning" in the Armenian (11.6%) than in the Greek (0%). Differences in levels on this variable were as follows: more English reading in nursery/kindergarten (37.0%) than in first (21.9%) and second grades (14.6%); more ET reading in second grade (36.6%) than nursery/kindergarten (7.4%); less ET other language skills in nursery/kindergarten (14.8%) than in first (30.2%) and second grades (31.7%); no occurrences of "Non-ET/non-language" subjects at the second grade level. Although expected frequencies were too small for a chi-square test of homogeneity by-school/by grade-level, Table 9c,(p.100 is presented to enable visual examination of the interaction of school and grade level effects and indicates that the greater occurrences of English reading as the "Intended subject of learning" took place in the Greek School at the nursery/kindergarten level (58.3%).

The greater occurrence of English reading as the "Intended subject of learning" in the Greek School, is similar to the findings for English reading as an "Actual subject of learning" (See p.93). This, again, may be attributable to the fact that English is the only subject taught in the Greek nursery/kindergarten for the first part of the school year.

Visual inspection of Table 9c also revealed the following: Although in the by-school analysis there was no

significant difference for ET reading (Table 9a), the greater occurrence of that intended subject in the second grade that appears in the by level analysis (Table 9b) is attributable only to the Armenian School. English speaking and other language related skills occurred more frequently in the Greek School at the nursery/kindergarten level (33.3%) and not at all in the Armenian Second grade.

In summary, the foregoing findings of the school and level differences for reading English, as the intended and actual subject of learning, were different for both schools. Reading English as both intended and actual subject of learning occurred more in the Greek School than in the Armenian School. Although there were no significant differences among grade levels for reading English as the actual subject, there was a greater difference in the nursery/kindergarten for its use as the intended subject of learning. In the by-school/by-grade-level analysis this apparent difference was attributable to the Greek nursery/kindergarten only.

There were no significant school differences for reading ET as the intended or actual subject of learning. Reading ET as the intended subject of learning was greater in the second grade. In the by-school/by-grade-level analysis this apparent difference was attributable to the Armenian second grade.

TABLE 5
FREQUENCIES FOR INTENDED SUBJECT
OF LEARNING IN MAJOR DATA
GROUP BY SCHOOL

	ARMENIAN (n=86)		GREEK (n=78)		TOTAL (n=164)	
	f	%	f	%	f	%
Intended Subject of Learning						
English Reading	12	14.0	25	32.1	37	22.6
ET Reading	17	19.8	18	23.1	35	21.3
Eng. Lang. in General	5	5.8	7	9.0	12	7.3
ET Lang. in General	15	17.4	12	15.4	27	16.5
English Writing	7	8.1	1	1.3	8	4.9
ET Writing	4	4.7	5	6.4	9	5.5
English Speaking	1	1.2	4	5.1	5	3.0
ET Speaking	6	7.0	4	5.1	10	6.1
Other Academic/Ethnic	1	1.2	1	1.3	2	1.2
/Non-Ethnic	7	8.1	0	0	7	4.3
Non Academic/Ethinic	8	9.3	1	1.3	9	5.5
/Non-Ethnic	3	3.5	0	0	3	1.8
		100.0		100.0		100.0

TABLE 6
FREQUENCIES FOR ACUTAL SUBJECT(S)
OF LEARNING IN MAJOR DATA
OR GROUP BY SCHOOL

	ARMENIAN (n=86)		GREEK (n=78)		TOTAL (n=164)	
	f	%	f	%	f	%
(a) Actual Subject(s) of Learning	(n=86)		(n=78)		(n=164)	
English Reading	21	24.4	33	42.3	54	32.9
ET Reading	32	37.2	24	30.8	56	34.1
English Writing	13	15.1	13	16.7	26	15.9
ET Writing	14	16.3	16	20.5	30	18.3
Eng. Speaking	6	7.0	15	19.2	21	12.8
ET Speaking	17	19.8	14	17.9	31	18.9
Eng. Lang. in General	11	12.8	12	15.4	23	14.0
ET Lang. in General	27	31.4	19	24.4	46	28.0
Other Academic/Ethnic	1	1.2	1	1.3	2	1.2
Other Academic/Non-Ethnic	9	10.5	2	2.6	11	6.7
Non-Academic/Ethnic	9	10.5	3	3.8	12	7.3
Non-Academic/Non-Ethnic	5	5.8	1	1.3	6	3.7

(a) Each variable in this group was coded (1) if it occurred and (0) if it did not occur. (If no occurrences were coded for any of the variables in the group all items in the group were considered missing.) Frequencies are reported only for occurrences.

TABLE 7
FREQUENCIES FOR COMPOSITE VARIABLES
FOR SUBJECT(S) OF ACTUAL LEARNING
IN MAJOR DATA GROUP BY SCHOOL

	ARMENIAN (n=86)		GREEK (n=78)		TOTAL (n=164)	
	f	%	f	%	f	%
(a) Subject(s) of Actual Learning: Skills Composite						
Reading only	16	18.6	20	25.6	36	22.0
Read. only/Other Lang. and Non Lang.	35	40.7	35	44.9	70	42.7
No Read./Other Lang. and Non Lang.	21	24.4	22	28.2	43	26.2
No Lang. Skills at All	14	16.3	1	1.3	15	9.1
		100.0		100.0		100.0
(b) Subjects of Actual Learning: Language/Skills Composite						
English Reading only	9	10.5	12	15.4	21	12.8
ET Reading only	7	8.1	7	9.0	14	8.5
Both Eng. & ET Reading	2	2.3	2	2.6	4	2.4
Eng. Read. & other No ET	10	11.6	19	24.4	29	17.7
ET Read. & other No Eng.	23	26.7	15	19.2	38	23.2
Eng Lang Skills-No Read.	5	5.8	6	7.7	11	6.7
ET Lang Skills-No Read.	14	16.3	11	14.1	25	15.2
Both Lang -No Read.	2	2.3	5	6.4	7	4.3
No Reading - ET or Eng. or Lang. Skills	14	16.3	1	1.3	15	9.1
		100.0		100.0		100.0

TABLE 8
CONTINGENCY TABLES FOR SIGNIFICANT DIFFERENCES BY SCHOOL OF ACTUAL SUBJECT(S) OF LEARNING

ACTUAL SUBJECT(S) OF LEARNING:
(a) ENGLISH READING

Count Row %	Not Occcurred	Occurred	Row Total
Armenian	65 75.6	21 24.4	86 100.0
Greek	45 57.7	33 42.3	78 100.0
Column Total	110 67.1	54 32.9	164 100.0

chi square= 5.14*, (df=1)

ACTUAL SUBJECT(S) OF LEARNING:
(b) SKILL COMPOSITE

Count Row %	Read Only	Read Only Other Lang: Non-Lang	No Read/ Other Lang: Non-Lang	No Lang At All	Row Total
Armenian	16 18.6	35 40.7	21 24.4	14 16.3	86 100.0
Greek	20 25.6	35 44.9	22 28.2	1 1.3	78 100.0
Colum Total	36 22.0	70 42.7	43 26.2	15 9.1	164 100.0

chi square= 11.37*, (df=3)

*$p \leq .05$

TABLE 9
CONTINGENCY TABLES FOR SIGNIFICANT DIFFERENCES BY SCHOOL AND LEVEL
FOR INTENDED SUBJECT OF LEARNING

INTENDED SUBJECT OF LEARNING

(a)

Count / Row % / School	Eng Read	ET Read	Eng-Other Lang	ET-Other Lang	Non-ET Non-Lang	ET/Non-Lang	Row Total
Armenian	12	17	13	25	10	9	86
	14.0	19.8	15.1	29.1	11.6	10.5	52.4
Greek	25	18	12	21	0	2	78
	32.1	23.1	15.4	26.9	0.0	2.6	47.6
Column Total	37	35	25	46	10	11	164
	22.6	21.8	15.2	28.0	6.1	6.7	100.0

chi square= 19.09** (df=5)

(b)

Count / Row % / Level	Eng Read	ET Read	Eng-Other Lang	ET-Other Lang	Non-ET Non-Lang	ET/Non-Lang	Row Total
Nursery/ Kgn.	10	2	6	4	2	3	27
	37.0	7.4	22.2	14.8	7.4	11.1	16.5
1st Grade	21	18	15	29	8	5	96
	21.9	18.8	15.6	30.2	8.3	5.2	58.5
2nd Grade	6	15	4	13	0	3	41
	14.6	36.6	9.8	31.7	0.0	7.3	25.0
Column Total	37	35	25	46	10	11	164
	22.6	21.3	15.2	28.0	6.1	6.7	100.0

chi square= 19.10* (df=10)

*p≤.05
**p≤.01

(c)

Count / Row % / School by Grade Level	Eng Read	ET Read	Eng-Other Lang	ET-Other Lang	Non-ET Non-Lang	ET-Non-Lang	Row Total
Armenian: Nurs/Kgn.	3	1	2	4	2	3	15
	20.0	6.7	13.3	26.7	13.3	20.0	9.1
1st Grade	9	8	11	17	8	4	57
	15.8	14.0	19.3	29.8	14.0	7.0	34.8
2nd Grade	0	8	0	4	0	2	14
	0.0	57.1	0.0	28.6	0.0	14.3	8.5
Greek: Nurs/Kgn.	7	1	4	0	0	0	12
	58.3	8.3	33.3	0.0	0.0	0.0	7.3
1st Grade	12	10	4	12	0	1	39
	30.8	25.6	10.3	30.8	0.0	2.6	23.8
2nd Grade	6	7	4	9	0	1	27
	22.2	25.9	14.8	33.3	0.0	3.7	16.5
Column Total	37	35	25	46	10	11	164
	22.6	21.3	15.2	28.0	6.1	6.7	100.0

2. Language Used in Learning

2.1 To what extent did English and ET as language used (medium of learning) occur across the sample?

A major pedagogical factor examined in association with reading acquisition was "Language used in various subjects of learning", especially reading. The frequencies for the seven mutually exclusive categories of this variable are presented in Table 10 (p.105). English and ET as the language used (or medium of learning) occurred alone to rather similar extents (30.1% and 26.4%), a finding similar to that for English and ET as actual subjects of learning. In the remaining observations (43.5%) both languages were used: in a neutral manner (20.9%), one aiding the other (14.7%), and one interfering with the other (8.0%). (Although "English aiding ET" was combined with "ET aiding English" for a valid chi-square computation, discrete frequencies revealed that approximately one-half to two-thirds of the "aiding" occurrences were for "English aiding ET").

2.2 How did English and ET as language used relate to English and ET reading acquisition?

In relation to "Actual subjects of learning," language used was significantly related to both reading English and reading ET, but in different ways (Tables 11a and b). In reading English (Table 11a, p.106) (X^2_a=72.6, df=4, $p \leq .001$), the "use of English alone" was disproportionately high (72.2%), with the "use of both languages in a neutral manner" being no greater than by chance. However, for reading ET (Table 11b, p.106)

(X^2_b=40.92 df=4, $p \leq .001$), "use of both languages in a neutral manner" (34.5%) as well as "use of ET alone" (41.8%) occurred disproportionately more. These two findings are not consistent with Fishman et al.'s (Final Report, Part II, 1982) conclusion that ET is used to explain English more often than vice versa (p. 31).

Fishman hypothesized that ". . .the major 'unknown' with respect to biliteracy acquisition may not be so much that two languages are involved instead of the more common one, but that each provides a hitherto unrecognized context for learning, using and evaluating the other" (1979, p. 1).

In regard to a discussion of language used as related to Fishman's concept, some qualitative data from the observations may serve to elaborate on the quantified findings. Both Armenian and English were used in a neutral manner for reading lessons in the ethnic tongue at the Armenian School. They were used primarily for class discussions of the reading material, for translation purposes (from Armenian to English), and for asking questions and responding (teacher asks and students respond with both languages used interchangeably). In initial reading lessons in the ethnic tongue at the Greek School, both languages were used in a neutral manner primarily for giving instructions (mostly in English), for vocabulary development and dictation (Greek words, English meanings), for asking questions and responding (both languages used interchangeably), and for linguistic comparisons.

If findings on future studies examining how the ethnic tongue and English are used in classroom situations are similar to those in this present study, it would be reasonable to assume that each language does provide a context for learning through their use and evaluation of each other.

2.3 Did schools and grade levels differ on English and ET as language used?

In analyses by school (X^2_a=15.2, df=4, $p \leq .01$) and by grade level (X^2_b=16.76, df=8, $p \leq .05$), differences were found for "Language used in actual subject(s) of learning" (Tables 12a, 12b, p. 107). "Both languages used in a neutral manner" occurred to a disproportionately greater extent at the Greek School (32.1%) than at the Armenian School (10.6%). Differences in levels for languages used were as follows: more of the use of both languages in a neutral manner in the second grade 36.6%); and use of both languages to aid each other to a greater extent in the nursery/kindergarten (25.9%) and to a lesser extent in the second grade (4.9%). Visual examination of the interaction of school and grade level effects for this variable (Table 12c). as suggested by the separate analyses, indicates that use of both languages in a neutral manner occurred to a greater extent in the Greek School in the second grade (44.4%). The greater use of both languages aiding one another at the nursery/kindergarten level occurred across schools; however, the lesser use of this language pattern in the second grade was attributable to the Greek School only (0.0%). Although the by-grade-level

analysis suggested a tendency for use of ET alone to increase (from 14.8% in nursery/kindergarten to 34.1% in the second grade), these differences bordered on chance. The by-school/by-grade-level analysis revealed that this apparent progression was attributable to a markedly low occurrence of the use of ET alone in the Greek nursery/kindergarten (8.3%) and a markedly high incidence in the Armenian second grade (57.1%).

In summary the foregoing differences between schools and grade levels suggested that the two schools were not similar. The use of both English and ET in an aiding manner was greater at nursery/kindergarten in both schools, but was less in the second grade only for the Greek School, which had a correspondingly higher incidence of the use of both languages in a neutral manner in the second grade.

An apparent tendency for the use of ET alone to increase from nursery/kindergarten to second grade was spurious, attributable to usages that were markedly low in the Greek nursery/kindergarten and high in the Armenian second grade. Otherwise, for the Armenian nursery/kindergarten and first grade and the Greek first and second grade, such usage was similar; about one-fifth to one-fourth of the observations for each. The by-school/by-grade level analysis, unavailable in the Fishman et al's report (Final Report, Part II, 1982), sheds further light on his findings that interlingual occurrences decrease as grades increase (p. 33). However, these contradictory findings must be interpreted with caution because

of the small numbers of nursery/kindergarten observations (15 and 12) in both schools.

TABLE 10
FREQUENCIES FOR LANGUAGE USED
IN ACTUAL SUBJECTS OF LEARNING
IN MAJOR DATA GROUP
BY SCHOOL

	ARMENIAN (n=86)		GREEK (n=78)		TOTAL (n=164)	
	f	%	f	%	f	%
Language Used in Actual Subject(s) of Learning						
English only	24	28.2	25	32.1	49	30.1
ET only	28	32.9	15	19.2	43	26.4
Both Used/Neutral	9	10.6	25	32.1	34	20.9
English Aids ET	11	12.9	4	5.1	15	9.2
ET Aids English	6	7.1	3	3.8	9	5.5
Eng. Interferes with ET	5	5.9	1	1.3	6	3.7
ET Interferes with Eng.	2	2.4	5	6.4	7	4.3
Missing Data	1	--	0	--	1	--
		100.0		100.0		100.0

TABLE 11
CONTINGENCY TABLES FOR RELATIONSHIPS
OF LANGUAGE USED IN ACTUAL SUBJECT(S)
OF LEARNING

LANGUAGES USED IN ACTUAL SUBJECT(S) OF LEARNING

	Count / Row %	ENG Alone	ET Alone	BOTH: In neutral manner	BOTH: One aiding	BOTH: One Interfering	Row Total
(a) ACTUAL SUBJECT OF LEARNING:	READING ENGLISH	11	42	27	17	12	109
	Not Occurred	10.1	38.5	24.8	15.6	11.0	66.9
		39	0	7	7	1	54
	Occurred	72.2	0.0	13.0	13.0	1.9	33.1
	Column Total	50 30.7	42 25.8	34 20.9	24 14.7	13 8.0	163(a) 100.0

chi square= 72.63* (df=4)

LANGUAGES USED IN ACTUAL SUBJECT(S) OF LEARNING

	Count / Row %	ENG Alone	ET Alone	BOTH: In neutral manner	BOTH: One aiding	BOTH: One Interfering	Row Total
(b) ACTUAL SUBJECT OF LEARNING:	READING ET	49	19	15	14	11	108
	Not Occurred	45.4	17.6	13.9	13.0	10.2	66.3
		1	23	19	10	2	55
	Occurred	1.8	41.8	34.5	18.2	3.6	33.7
	Column Total	50 30.7	42 25.8	34 20.9	24 14.7	13 8.0	163(a) 100.0

chi square= 40.92* (df=4)

(a) one observation missing data on language

*p≤.001

TABLE 12
CONTINGENCY TABLES FOR SIGNIFICANT DIFFERENCES
IN LANGUAGES USED IN ACTUAL SUBJECT(S) OF LEARNING
BY SCHOOL AND BY LEVEL

LANGUAGE USED IN ACTUAL SUBJECT(S) OF LEARNING

(a)

Count / Row % / School	ENG Alone	ET Alone	BOTH: In neutral manner	BOTH: One Aiding	BOTH: One Intf	Row Total
Armenian	24 / 28.2	28 / 32.9	9 / 10.6	17 / 20.0	7 / 8.2	85 / 52.1
Greek	25 / 32.1	15 / 19.2	25 / 32.1	7 / 9.0	6 / 7.7	78 / 47.9
Column Total	49 / 30.1	43 / 26.4	34 / 20.9	24 / 14.7	13 / 8.0	163(a) / 100.0

chi square= 15.45** (df=4)

(b)

Count / Row % / Grade Level	ENG Alone	ET Alone	BOTH: In neutral manner	BOTH: One Aiding	BOTH: One Intf	Row Total
Nursery/ Kgn.	9 / 33.3	4 / 14.8	4 / 14.8	7 / 25.9	3 / 11.1	27 / 16.6
1st Grade	32 / 33.7	25 / 26.3	15 / 15.8	15 / 15.8	8 / 8.4	95 / 58.3
2nd Grade	8 / 19.5	14 / 34.4	15 / 36.6	2 / 4.9	2 / 4.9	41 / 25.2
Column Total	49 / 30.1	43 / 26.4	34 / 20.9	24 / 14.7	13 / 8.0	163(a) / 100.0

chi square= 16.76* (df=8)

*$p \leq .05$
**$p \leq .01$

(c)

Count / Row % / School by Grade Level	ENG Alone	ET Alone	BOTH: In neutral manner	BOTH: One Aiding	BOTH: One Intf	Row Total
Armenian: Nurs/Kgn	6 / 40.0	3 / 20.0	2 / 13.3	4 / 26.7	0 / 0.0	15 / 9.2
1st Grade	19 / 33.9	16 / 28.6	4 / 7.1	11 / 19.6	6 / 10.7	56 / 34.4
2nd Grade	0 / 0.0	8 / 57.1	3 / 21.4	2 / 14.3	1 / 2.1	14 / 8.6
Greek: Nurs/Kgn	3 / 25.0	1 / 8.3	2 / 16.2	3 / 25.0	3 / 25.0	12 / 7.4
1st Grade	14 / 35.9	8 / 20.5	11 / 28.2	4 / 10.3	2 / 5.1	39 / 23.9
2nd Grade	8 / 29.6	6 / 22.2	12 / 44.4	0 / 0.0	1 / 3.2	27 / 16.6
Column Total	50 / 30.7	42 / 25.8	34 / 20.9	24 / 14.7	13 / 8.0	163(a) / 100.0

(a) one observation was missing data on language used in actual subjects of learning

3. Methods of Teaching Initial Reading

3.1 To what extent did nine methods of teaching initial reading occur across the sample?

One of the major pedagogical variable groups examined in relation to this study was that of the methods used to teach initial reading skills. The current study also attempted to examine the extent to which a "decoding" (synthetic) emphasis (Flesch, 1955; Chall, 1967, 1983; Ehri and Wilce, 1985) and a "meaning" (analytic) emphasis (Smith, 1978; Goodman, 1982) of teaching initial reading occurred in the two schools. (See Review of Literature pp. 36-72.)

The frequencies for the nine dichotomous categories of the variable, "Methods of teaching initial reading skills" (with 90 cases having data on this variable) are presented in Table 13 (p. 112). The analytic method of sentence reading occurring in 35.6% of the cases, was the most frequently occurring methods followed by (analytic) whole words (34.4%). The synthetic methods of systematic phonics (32.2%), alphabet spelling (26.7%) and word families (21.1%) occurred less frequently. Alphabet recognition although not considered by Chall to be a synthetic or analytic method per se, occurred in one-third of the cases (33.3%). However, Carroll (1970), in his list of eight essentials necessary for developing mature reading, placed alphabet recognition third for "decoding" proponents (See Review of Literature pp. 40-42).

In examining frequency of occurrences, both analytic and synthetic methods of teaching reading were utilized in

the reading acquisition programs in both schools. However, analytic methods (whole words and sentences) seem to occur to a greater extent in the Greek School.

3.2 How did nine methods of teaching reading relate to English and ET reading acquisition?

Chi-square tests of independence with phi coefficients revealed six significant relationships of "Actual subject(s) of learning" with "Methods of teaching initial reading skills (Table 14, p.113). These were: Reading English with alphabet spelling (X_a^2=4.07, df=1, $p \leq .05$, phi=.24 positive), word families (X_b^2=12.30, df=1, $p \leq .001$, phi=.39 positive), and syllables (X_c^2=13.58, df=1, $p \leq .001$, phi=.42 negative); reading ET with alphabet spelling (X_d^2=4.60, df=1, $p \leq .05$, phi=.25 negative), word families (X_e^2=9.61, df=1, $p \leq .001$, phi=.35 negative), and syllables (X_f^2=5.75, df=1, $p \leq .05$, phi=.28 positive). The strength of these relationships is modest to moderate.

The relationships of these "Actual subject(s) of learning with "Methods" were directly opposite for English and ET reading. Occurrences of English reading was associated with the occurrence of synthetic methods of alphabet spelling and word families, and associated with the non-occurrence of syllables. ET reading was associated with the occurrence of the syllable method and the non-occurrence of alphabet spelling and word families methods.

3.3 Did schools and grade levels differ on nine methods of teaching initial reading?

There were two methods on which grade levels differed significantly: alphabet recognition (X_a^2=22.53, df=2, $p \leq .001$) and alphabet spelling (X_b^2=14.20, df=2, $p \leq .001$) (Table 15, p.116). Alphabet recognition occurred disproportionately more in the nursery/kindergarten (76.5%) than in the first grade (31.4%). In addition, alphabet spelling occurred disproportionately more at the nursery/kindergarten level (52.9%) than in the first grade (29.4%). Both these methods were virtually non-occurring at the second grade level.

In the by-school/by-grade-level analysis one method, sentence reading, was found to differ significantly between schools (X_a^2=10.77, df=1, $p \leq .001$) and between grade levels (X_b^2=15.26, df=2, $p \leq .001$) (Table 16, p.117). Sentence reading occurred to a greater extent in the Greek School (51.1%) than in the Armenian School (16.7%). It also occurred more in the second grade (68.2%) than in nursery/kindergarten (11.8%). Visual examination of the interaction of the by school and by grade level effects (Table 16c, p.) on sentence reading indicates that there were disproportionately greater occurrences in the Greek School at the second grade level (78.6%) than in the Armenian School at the same level (50.0%). There were no instances of the use of sentences as a method in the Armenian School at the nursery/kindergarten level and first grade levels.

This study found that the analytic method of sentence reading predominated at the Greek School in the second grade with its noticeable absence in the Armenian School in the nursery/kindergarten and first grade. These findings are

consistent with Fishman et al.'s findings that the synthetic method was primarily implemented in nursery/kindergarten and first grade and that the sentence method became very important in the second grade and is "...clearly a grade related phenomena rising consistently from grade to grade" (Final Report, Part II, 1982, p. 13).

TABLE 13
FREQUENCIES FOR METHODS OF TEACHING
INITIAL READING SKILLS IN MAJOR
DATA GROUP BY SCHOOL

	ARMENIAN (n=86)		GREEK (n=78)		TOTAL (n=164)	
	f	%	f	%	f	%
Methods of Teaching Initial Reading Skills (a)						
Missing Data	44 (n=42)	--	30 (n=48)	--	74 (n=90)	--
Alphabet Recognition	13	31.0	17	35.4	30	33.3
Analytic						
Whole Word	10	23.8	21	43.8	31	34.4
Phrases	5	11.9	0	0	5	5.6
Sentences	7	16.7	25	52.1	32	35.6
Intrinsic Phonics	3	7.1	6	12.5	9	10.0
Synthetic						
Alphabet Spelling	10	23.8	14	29.2	24	26.7
Systematic Phonics	13	31.0	16	33.3	29	32.2
Word Families	11	26.2	8	16.7	19	21.1
Syllables	7	16.7	6	12.5	13	14.4

(a) Each variable in this group was coded (1) if it occurred and (0) if it did not occur. (If no occurrences were coded for any of the variables in the group all items in the group were considered missing.) Frequencies are reported only for occurrences.

TABLE 14
CONTINGENCY TABLES FOR SIGNIFICANT RELATIONSHIPS
BETWEEN
METHODS OF TEACHING INITIAL READING
AND ACTUAL SUBJECT OF LEARNING

METHODS:

(a) ALPHABET SPELLING

SUBJECT OF ACTUAL LEARNING: ENGLISH READING	Not Occurred	Occurred	Row Total
Not Occurred	37 41.1	7 7.8	44 48.9
Occurred	29 32.2	17 18.9	46 51.1
Column Total	66 73.3	24 26.7	90 100.0

Count
Total %

chi square= 4.07*, (df=1)
phi=.24

(b) WORD FAMILIES

ENGLISH READING	Not Occurred	Occurred	Row Total
Not Occurred	42 46.7	2 2.2	44 48.9
Occurred	29 32.2	17 18.9	46 51.1
Column Total	71 78.9	19 21.1	90 100

Count
Total %

chi square=12.31***, (df=1)
phi=.39

*$p \leq .05$
**$p \leq .01$
***$p \leq .001$

TABLE 14
CONTINGENCY TABLES FOR SIGNIFICANT RELATIONSHIPS
BETWEEN
METHODS OF TEACHING INITIAL READING
AND ACTUAL SUBJECT OF LEARNING
(continued)

METHODS:

(c) SYLLABLES

SUBJECT OF ACTUAL LEARNING: ENGLISH READING	Not Occurred	Occurred	Row Total
Not Occurred	Count 31 Total % 34.4	13 14.4	44 48.0
Occurred	46 51.1	0 0.0	46 51.1
Column Total	77 85.6	13 14.4	90 100

chi square=13.58***, (df=1)
phi=.42

(d) ALPHABET SPELLING

READING ET	Not Occurred	Occurred	Row Total
Not Occurred	Count 28 Total % 31.1	17 18.9	45 50.0
Occurred	38 42.2	7 7.8	45 50.0
Column Total	66 73.3	24 26.7	90 100.0

chi square=4.60*, (df=1)
phi=.25

*$p \leq .05$
**$p \leq .01$
***$p \leq .001$

TABLE 14
CONTINGENCY TABLES FOR SIGNIFICANT RELATIONSHIPS
BETWEEN
METHODS OF TEACHING INITIAL READING
AND ACTUAL SUBJECT OF LEARNING
(continued)

METHODS:

(e) WORD FAMILIES

SUBJECT OF ACTUAL LEARNING:	READING ET: Not Occurred	READING ET: Occurred	Row Total
Not Occurred	29 32.2	16 17.8	45 50.0
Occurred	42 46.7	3 3.3	45 50.0
Column Total	71 78.9	19 21.1	90 100.0

chi square=9.61***, (df=1)
phi=.35

(f) SYLLABLES

	READING ET: Not Occurred	READING ET: Occurred	Row Total
Not Occurred	43 47.8	2 2.2	45 50.0
Occurred	34 37.8	11 12.2	45 50.0
Column Total	77 85.6	13 14.4	90 100.0

chi square=5.75*, (df=1)
phi=.28

*$p \leq .05$
**$p \leq .01$
***$p \leq .001$

TABLE 15
CONTINGENCY TABLES FOR SIGNIFICANT DIFFERENCES BY LEVEL FOR METHODS OF TEACHING INITIAL READING SKILLS

METHODS:

(a) ALPHABET RECOGNITION

Count Row %	Not Occurred	Occurred	Row Total
Nursery/ Kgn.	4 23.5	13 76.5	17 100.0
1st Grade	35 68.6	16 31.4	51 100.0
2nd Grade	21 95.5	1 4.5	22 100.0
Column Total	60 66.7	30 33.3	90 100.00

chi square= 22.53* , (df=2)

METHODS:

(b) ALPHABET SPELLING

Count Row %	Not Occurred	Occurred	Row Total
Nursery/ Kgn.	8 47.1	9 52.9	17 100.0
1st Grade	36 70.6	15 29.4	51 100.0
2nd Grade	22 100.0	0 0.0	22 100.0
Column Total	66 73.3	24 26.7	90 100.0

chi square= 14.20* , (df=2)

*$p \leq .001$

TABLE 16
CONTINGENCY TABLES FOR SIGNIFICANT DIFFERENCES
BY SCHOOL AND LEVEL
FOR METHODS OF TEACHING INITIAL READING SKILLS

METHODS:

SENTENCES

(a)

Count / Row % / School	Not Occurred	Occurred	Row Total
Armenian	35 83.3	7 16.7	42 46.7
Greek	23 47.9	25 51.1	48 53.3
Column Total	58 64.4	32 35.6	90 100.0

chi square= 10.77* (df=1)

(b)

Count / Row % / Level	Not Occurred	Occurred	Row Total
Nursery/ Kgn.	15 88.2	2 11.8	17 18.9
1st Grade	36 70.6	15 29.4	51 56.7
2nd Grade	7 31.8	15 68.2	22 24.4
Column Total	58 64.8	32 35.6	90 100.0

chi square= 15.26* (df=2)

*p≤.001

(c)

Count / Row % / School by Grade Level	Not Occurred	Occurred	Row Total
Armenian:			
Nursery/ Kgn.	9 100.0	0 0.0	9 10.0
1st Grade	22 88.0	3 12.0	25 22.8
2nd Grade	4 50.0	4 50.0	8 8.9
Greek:			
Nursery/ Kgn.	6 75.0	2 25.0	8 8.9
1st Grade	14 53.8	12 46.2	26 28.9
2nd Grade	3 21.4	11 78.6	14 15.6
Column Total	58 64.4	32 35.6	90 100.0

4. Reading Strategies

4.1 To what extent did six reading strategies occur across the sample?

Another major pedagogical variable group examined in relation to this study was that of "Reading strategies" used by the teachers in teaching initial reading skills. The frequencies for the eight dichotomous categories of this variable (with 70 cases having data on this variable group) are presented in Table 17 (p.119). Three categories associated with oral reading strategies occurred most frequently. They were individual oral (47.1%), modified "echo" (31.4%), and choral reading (28.6%).

4.2 How did six reading strategies relate to English and ET reading acquisition?

There was no significant relationship found between any of the six strategies and either English or ET reading as the actual subject of learning.

4.3 Do schools and grade levels differ on six reading strategies?

There were three reading strategies on which schools differed significantly (Table 18, p.120) : Modified "echo" (X_a^2=8.97, df=1, $p \leq .01$), choral reading (X_b^2=9.38, df=1, $p \leq .01$), and individual oral (X_c^2=13.01, df=1, $p \leq .001$) - all oral strategies. Two strategies occurred to a much larger extent in the Greek School: choral reading (47.1%) and modified

"echo" (50.1%), compared to 11.1% and 13.9%, respectively in the Armenian School. Individual oral reading occurred more in the Armenian School (69.4%) than in the Greek School (23.5%).

This study did not find any grade level differences in strategies. This is inconsistent with Fishman's et al. study in which "both choral and general oral reading decline as grade level increases" and "...individual oral reading is demonstrably higher in the higher grades" (Final Report, Part II, pp. 19-20).

TABLE 17
FREQUENCIES FOR READING STRATEGIES
IN MAJOR DATA GROUP BY SCHOOL

	ARMENIAN (n=86)		GREEK (n=78)		TOTAL (n=164)	
	f	%	f	%	f	%
Reading Strategies (a)						
Missing Data	50 (n=36)	--	44 (n=34)	--	94 (n=70)	--
Oral						
Round Robin	2	5.6	6	17.6	8	11.4
Choral	4	11.1	16	47.1	20	28.6
Modified "echo"	5	13.9	17	50.0	22	31.4
Individual Oral	25	69.4	8	23.5	33	47.1
Silent						
Class or Group	2	5.6	0	0	2	2.9
Individual	6	16.7	0	0	6	8.6

(a) Each variable in this group was coded (1) if it occurred and (0) if it did not occur. (If no occurrences were coded for any of the variables in the group all items in the group were considered missing.) Frequencies are reported only for occurrences.

TABLE 18
CONTINGENCY TABLES FOR SIGNIFICANT DIFFERENCES BY SCHOOL FOR READING STRATEGIES

(a) MODIFIED "ECHO"

Count / Row %	Not Occurred	Occurred	Row Total
Armenian	31 86.1	5 13.9	36 100.0
Greek	17 50.0	17 50.0	34 100.0
Column Total	48 68.6	22 31.4	70 100.0

chi square=8.97* , (df=1)

(b) CHORAL READING

Count / Row %	Not Occurred	Occurred	Row Total
Armenian	32 88.9	4 11.1	36 100.0
Greek	18 52.9	16 47.1	34 100.0
Column Total	50 71.4	20 28.6	70 100.0

chi square=9.38* , (df=1)

(c) INDIVIDUAL ORAL

Count / Row %	Not Occurred	Occurred	Row Total
Armenian	11 30.6	25 69.4	36 100.0
Greek	26 76.5	8 23.5	34 100.0
Column Total	37 52.9	33 47.1	70 100.0

chi square=13.01** , (df=1)

*$p \leq .01$
**$p \leq .001$

5. Approaches to Teaching Reading

5.1 To what extent did four approaches to teaching reading occur across the sample?

Of the four categories comprising the dichotomous variable "Approaches to initial reading/learning", with 77 cases having data on this group, the preponderance of occurrences were for the basal reader approach (76.6%) with 15.6% occurring for the experiential approach. No occurrences were noted for the individualized approach (Table 19, p. 122).

5.2 How did four approaches to teaching reading relate to English and ET reading acquisition?

In the present study there was no relationship between any single approach and either English reading or ET reading as independent actual subjects of learning.

5.3 Do schools and grade levels differ on four approaches to teaching reading?

There were no significant differences between schools on any of the four approaches. However, grade levels differed significantly on the basal reader approach ($X^2=8.13$, df=2, $p \leq .01$) (Table 20, p. 123). This approach occurred to a large extent in the first and second grade (83.3% and 81.1%, respectively) and to a much lesser extent in a nursery/kindergarten (46.2%). Of 12 cases occurring for the experiential approach, five were noted to occur at the nursery/kindergarten level.

TABLE 19
FREQUENCIES FOR APPROACHES TO INITIAL READING/LEARNING IN MAJOR DATA GROUP BY SCHOOL

	ARMENIAN (n=86)		GREEK (n=78)		TOTAL (n=164)	
	f	%	f	%	f	%
Approaches to Initial Reading/Learning (a)						
Missing Data	55	--	32	--	87	--
	(n=31)		(n=46)		(n=77)	
Experiential	7	22.6	5	10.9	12	15.6
Basal Reader	23	74.2	36	78.3	59	76.6
Individualized	0	0	0	0	0	
Other	2	6.5	8	17.4	10	13.0

(a) Each variable in this group was coded (1) if it occurred and (0) if it did not occur. (If no occurrences were coded for any of the variables in the group all items in the group were considered missing.) Frequencies are reported only for occurrences.

TABLE 20
CONTINGENCY TABLE FOR SIGNIFICANT DIFFERENCES BY LEVEL FOR APPROACHES TO INITIAL READING/LEARNING

BASAL READERS

Count / Row %	Not Occurred	Occurred	Row Total
Nursery/ Kgn.	7 53.8	6 46.2	13 100.0
1st Grade	7 18.2	35 81.8	42 100.0
2nd Grade	4 18.2	18 81.8	22 100.0
Column Total	18 23.4	59 76.6	77 100.0

chi square=8.13* , (df= 2)

*$p \leq .01$

6. Units of In-class Reading/Learning Activities

6.1 To what extent did four units of in-class reading/learning activities occur across the sample?

Four "Units used for in-class reading/learning activities" constituted another group of pedagogical variables examined in this study. Data on this variable was available in 115 PO's. The entire class was found to be the most frequently occurring unit of in-class instruction (86.1%), with all other units occurring in less than 12% of the frequencies noted (Table 21, p. 125).

6.2 How did four units of in-class reading/learning activities relate to English and ET reading acquisition?

In the present study there was no significant relationship between any single unit and either English reading or ET reading as independent actual subject of learning.

6.3 Do schools and grade levels differ on four units of in-class reading/learning activity?

The two schools differed significantly on two of the four units: entire class (X^2_a=10.54, df=1, $p \leq .001$) and seat work (X^2_b=7.38, df-1, $p \leq .01$) (Table 22, p. 126). The entire class unit was used to a greater extent at the Greek School (98.1%) than in the Armenian School (75.4%). Seat work activities occurred more in the Armenian School (19.7%) than in the Greek School (1.9%).

TABLE 21
FREQUENCIES FOR UNITS OF IN-CLASS
READING/LEARNING ACTIVITY IN
MAJOR DATA GROUP BY SCHOOL

	ARMENIAN (n=86)		GREEK (n=78)		TOTAL (n=164)	
	f	%	f	%	f	%
Units of In-class Reading/ Learning Activity (a)						
Missing Data	25 (n=61)		24 (n=54)		49 (n=115)	
Entire class	46	75.4	53	98.1	99	86.1
Small groups	9	14.8	1	1.9	10	8.7
Individual	6	9.8	3	5.6	9	7.8
Seat Work	12	19.7	1	1.9	13	11.3

(a) Each variable in this group was coded (1) if it occurred and (0) if it did not occur. (If no occurrences were coded for any of the variables in the group all items in the group were considered missing.) Frequencies are reported only for occurrences.

TABLE 22
CONTINGENCY TABLES FOR SIGNIFICANT DIFFERENCES BY SCHOOL FOR UNITS OF IN-CLASS READING/LEARNING ACTIVITY

UNITS:

(a) ENTIRE CLASS

Count / Row%	not occurred	occurred	Row Total
Armenian	15 24.6	46 75.4	61 100.0
Greek	1 1.9	53 98.1	54 100.0
Column Total	16 13.9	99 86.1	115 100.0

chi square=10.54** (df=1)

(b) SEAT WORK

Count / Row%	not occurred	occurred	Row Total
Armenian	49 80.3	12 19.7	61 100.0
Greek	53 98.1	1 1.9	54 100.0
Column Total	102 88.7	13 11.3	115 100.0

chi square=7.38* (df=1)

*$p \leq .01$
**$p \leq .001$

7. Preparation/Sources of Reading/Learning Materials

7.1 To what extent did ten preparations/sources of reading materials occur across the sample?

The variable group "Preparation/source of reading/learning materials" was made up of ten items having 55 cases with data on those items (Table 23, p.130). Of these, "Blackboard" was used most frequently (36.7%). "Commercial prepared texts from the United States under non-ethnic auspices" and "commercially prepared workbooks and worksheets" were second and third most frequently occurring (23.9%). All other materials occurred in less than 20% of the cases.

7.2 How did the ten preparations/sources relate to English and ET reading acquisition?

Both English and ET as actual subjects of learning were found to be moderately related to "Preparation/sources of materials" (Table 24, p.131). The preparations and sources that were indicative of English reading were: two moderately strong positive relationships of commercial texts published in the United States under non-ethnic auspices (X_a^2=33.51, df=1, $p \leq .001$, phi=.58) and commercial workbooks and worksheets (X_b^2=19.65, df=1, $p \leq .001$, phi=.45). Two modest negative relationships associated with reading English were commercial textbooks published under ethnic auspices in the ethnic country (X_c^2=8.41, df=1, $p \leq .01$, phi=.30) and in the United States (X_d^2=6.66, df=1, $p \leq .01$, phi=.28).

Of the relationships that were associated with ET reading

there was a modest positive relationship of commercial textbooks published in the United States under ethnic auspices (X_e^2=7.65, df=1, p≤.01, phi=.29) and commercial texts published in the ethnic country (X_f^2=19.01, df=1, p≤.001, phi=.44). There were two moderately strong negative relationships associated with reading ET: commercial texts published in the United States under non-ethnic auspices (X_g^2=17.23, df=1, p≤.01, phi=.42), and commercial workbooks/worksheets (X_h^2=13.68, df=1, p≤.001, phi=.38).

7.3 Do schools and grade levels differ on ten preparations/sources of reading/learning materials?

Schools differed significantly on two preparations/sources: Use of commercial texts published in the United States under ethnic auspices (X_a^2=8.53, df=1, p≤.01), and commercially prepared workbooks and worksheets (X_b^2=6.38, df=1, p≤.01) (Table 25, p. 135). The use of commercial textbooks published in the United States under ethnic auspices occurred to a greater extent for the Armenian School (21.8%) as compared to the Greek School (1.9%). Conversely, commercially prepared workbooks and worksheets occurred to a greater extent in the Greek School (35.2%) as compared to the Armenian School (12.7%).

There were no significant differences found in the grade level analysis alone. However, the use of commercial texts published in the ethnic country was significantly different for the by-school (X_a^2=11.53, df-1, p≤.01) and by-grade-level

analyses (X_b^2=8.32, df=2, $p \leq .01$) (Table 26, p. 136). This preparation/source was used to a greater extent in the Greek School (29.6%) than in the Armenian School (3.6%). It occurred more frequently in the second grade (32.1%) than in the nursery/kindergarten (0%). Visual examination of the interaction effects of school and level indicated that the predominant use of commercial texts published in the ethnic country were in the Greek School at the first and second grade levels (32.1% and 36.8%, respectively).

Possible reasons for school differences are discussed in Chapter V.

TABLE 23
FREQUENCIES FOR PREPARATION/SOURCE
OF READING MATERIALS IN MAJOR
DATA GROUP BY SCHOOL

	ARMENIAN (n=86)		GREEK (n=78)		TOTAL (n=164)	
	f	%	f	%	f	%
Preparation and Source of Reading/Learning Materials (a)						
Missing Data	31 (n=55)	--	24 (n=54)	--	55 (n=109)	--
Commercially Prepared Text						
Ethnic country	2	3.6	16	29.6	18	16.5
US/Ethnic Auspices	12	21.8	1	1.9	13	11.9
US/Non-Ethnic Auspices	13	23.6	13	24.1	26	23.9
Commercial Worksheets/Books	7	12.7	19	35.2	26	23.9
Teacher Prepared						
Textbooks	1	1.8	0	0	1	.9
Worksheets/Books	6	10.9	3	5.6	9	8.3
Books/Other than Texts	2	3.6	1	1.9	3	2.8
Calendars, Charts, Posters	10	18.2	5	9.3	15	13.8
Blackboard	15	27.3	25	46.3	40	36.7
Other	6	10.9	8	14.8	14	12.8

(a) Each variable in this group was coded (1) if it occurred and (0) if it did not occur. (If no occurrences were coded for any of the variables in the group all items in the group were considered missing.) Frequencies are reported only for occurrences.

TABLE 24
CONTINGENCY TABLES FOR SIGNIFICANT RELATIONSHIPS
ACROSS-VARIABLE-GROUPS
FOR SUBJECT(S) OF LEARNING
AND PREPARATION/SOURCE OF READING MATERIALS

ACTUAL SUBJECT(S) OF LEARNING:

(a) READING ENGLISH

Count / Row%			Row Total
SOURCES: COMMERCIAL TEXT US/NON-ETHNIC	not occurred	occurred	
not occurred	59 54.1	24 22.0	83 76.1
occurred	1 0.9	25 22.9	26 23.9
Column Total	60 55.0	49 45.0	109 100.0

chi square=33.51* (df=1)
phi=.58

(b) READING ENGLISH

Count / Row%			Row Total
COMMERCIAL WORKBOOKS/SHEETS	not occurred	occurred	
not occurred	56 51.4	27 24.8	83 76.1
occurred	4 3.7	22 20.2	26 23.9
Column Total	60 55.0	49 45.0	109 100.0

chi square=19.65* (df=1)
phi=.45

*$p \leq .001$

TABLE 24
CONTINGENCY TABLES FOR SIGNIFICANT RELATIONSHIPS
ACROSS-VARIABLE-GROUPS
FOR SUBJECT(S) OF LEARNING
AND PREPARATION/SOURCE OF READING MATERIALS
(continued)

ACTUAL SUBJECT(S) OF LEARNING:

(c) READING ENGLISH

Count / Row%			Row Total
SOURCES: COMMERCTIAL TEXT / ETHNIC COUNTRY	not occurred	occurred	
not occurred	44 40.4	47 43.1	91 83.5
occurred	16 14.7	2 1.8	18 16.5
Column Total	60 55.0	49 45.0	109 100.0

chi square=8.41* (df=1)
phi=.30

(d) READING ENGLISH

Count / Row%			Row Total
COMMERCIAL TEXT / US/ETHNIC AUSPICES	not occurred	occurred	
not occurred	48 44.0	48 44.0	96 88.1
occurred	12 11.0	1 0.9	13 11.9
Column Total	60 55.0	49 45.0	109 100.0

chi square=6.66* (df=1)
phi=.28

*$p \leq .01$

TABLE 24
CONTINGENCY TABLES FOR SIGNIFICANT RELATIONSHIPS
ACROSS-VARIABLE-GROUPS
FOR SUBJECT(S) OF LEARNING
AND PREPARATION/SOURCE OF READING MATERIALS
(continued)

ACTUAL SUBJECT(S) OF LEARNING:

(e) READING ET

Count
Row%

COMMERCIAL TEXT US/ETHNIC	not occurred	occurred	Row Total
not occurred	58 53.2	38 34.9	96 88.1
occurred	2 1.8	11 10.1	13 11.9
Column Total	60 55.0	49 45.0	109 100.0

chi square=7.65* (df=1)
phi=.29

(f) READING ET

Count
Row%

SOURCES: COMMERCIAL TEXT ETHNIC COUNTRY	not occurred	occurred	Row Total
not occurred	59 54.1	32 29.4	91 83.5
occurred	1 0.9	17 15.6	18 16.5
Column Total	60 55.0	49 45.0	109 100.0

chi square=19.01** (df=1)
phi=.44

*p≤.01
**p≤.001

TABLE 24
CONTINGENCY TABLES FOR SIGNIFICANT RELATIONSHIPS
ACROSS-VARIABLE-GROUPS
FOR SUBJECT(S) OF LEARNING
AND PREPARATION/SOURCE OF READING MATERIALS
(continued)

ACTUAL SUBJECT(S) OF LEARNING:

(g) READING ET

Count / Row%			Row Total
SOURCES: COMMERCIAL TEXT US/NON-ETHNIC	not occurred	occurred	
not occurred	36 33.0	47 43.1	83 76.1
occurred	24 22.0	2 1.8	26 23.9
Column Total	60 55.0	49 45.0	109 100

chi square=17.23* (df=1)
phi=.42

(h) READING ET

Count / Row%			Row Total
COMMERCIAL WORKBOOKS/SHEETS	not occurred	occurred	
not occurred	37 33.9	46 42.2	83 76.1
occurred	23 21.1	3 2.8	26 23.9
Column Total	60 55.0	49 45.0	109 100.0

chi square=13.68* (df=1)
phi=.38

*$p \leq .001$

TABLE 25
CONTINGENCY TABLES FOR SIGNIFICANT DIFFERENCES
BY SCHOOL
FOR PREPARATION/SOURCE OF
READING MATERIALS

MATERIAL SOURCE:

(a) COMMERCIAL TEXT/U.S. ETHNIC AUSPICES

Count Row%	not occurred	occurred	Row Total
Armenian	43 78.2	12 21.8	55 100.0
Greek	53 98.1	1 1.9	54 100.0
Column Total	96 88.1	13 11.9	109 100.0

chi square=8.53* (df=1)

MATERIAL SOURCE:

(b) COMMERCIAL WORKSHEETS/BOOKS

Count Row%	not occurred	occurred	Row Total
Armenian	48 87.3	7 12.7	55 100.0
Greek	35 64.8	19 35.2	54 100.0
Column Total	83 76.1	26 23.9	109 100.0

chi square=6.38* (df=1)

*$p \leq .01$

TABLE 26
CONTINGENCY TABLES FOR SIGNIFICANT DIFFERENCES
BY SCHOOL AND LEVEL
FOR PREPARATION/SOURCE OF READING MATERIALS

MATERIAL SOURCE: COMMERCIAL TEXT/ETHNIC COUNTRY

(a)

Count / Row %	not occurred	occurred	Row Total
Armenian	53 96.4	2 3.6	55 60.5
Greek	38 70.4	16 29.6	54 49.5
Column Total	91 83.5	18 16.5	109 100.0

chi square=11.53* (df=1)

(b)

Count / Row %	not occurred	occurred	Row Total
Nursery/ Kgn.	15 100.00	0 0.0	15 13.4
1st Grade	57 85.4	9 13.6	66 60.6
2nd Grade	19 67.9	9 32.1	28 25.7
Column Total	91 83.5	18 16.5	109 100.0

chi square=8.32* , (df=2)

*$p \leq .01$

MATERIAL SOURCE: COMMERCIAL TEXT/ETHNIC COUNTRY

(c)

Count / Row %	not occurred	occurred	Row Total
Armenian: Nursery/Kgn.	8 100.0	0 0.0	8 7.3
1st Grade	38 100.0	0 0.0	38 34.9
2nd Grade	7 77.8	2 22.2	9 8.3
Greek: Nursery/Kgn.	7 100.0	0 0.0	7 6.4
1st Grade	19 67.9	9 32.1	28 25.7
2nd Grade	12 63.2	7 36.8	19 17.4
Column Total	91 93.5	18 16.5	109 100.0

8. Themes of Materials Used for Reading/Learning Activity

8.1 To what extent did seven themes of materials used for reading/learning activity occur across the sample?

"Themes of materials used for reading/learning activity" were coded as one of seven mutually exclusive categories (Table 27, p. 138). The major occurrences noted for this variable were urban themes (24.2%) and rural themes (21.2%) followed by themes that were related to the home (people and family) and school (18.2%, respectively).

The 14 occurrences for themes found in the minor data group indicated that ethnic religious holy day themes and "other" ethnic themes occurred more frequently than any non-ethnic theme (35.7%, respectively for both broups) (Table 28, p. 138). This data came from interviews of or about day students and day school special-subject teachers (ET teachers) and included discussions of materials containing themes of a religio-ethnic nature found in religion classes in the day schools, Saturday Schools, and Sunday Schools. Along with religious holy day topics, the themes were about religious and national "heros", national holidays (ethnic), and moral guidelines.

8.2 How did categories of themes of reading materials relate to English and ET reading acquisition?

No significant relationship was found between themes and English or ET reading as actual subject(s) of learning.

8.3 Do schools and grade levels differ on categories of themes of reading materials?

There were no significant differences between schools or among grade levels on themes.

TABLE 27

FREQUENCIES FOR REORDERED VARIABLE FOR THEMES OF READING/LEARNING MATERIALS FOR MAJOR DATA GROUP BY SCHOOL

	ARMENIAN (n=86)		GREEK (n=78)		TOTAL (n=164)	
	f	%	f	%	f	%
Themes of Reading/Learning Materials						
Religious holiday	2	13.3	1	5.6	3	9.1
National holidays	1	6.7	0	0	1	3.0
Home (People & Family)	2	13.3	4	26.7	6	18.2
School	3	20.0	3	16.7	6	18.2
Urban	1	6.7	6	33.3	7	21.2
Rural	5	33.3	3	16.7	8	24.2
Fairy Tales	1	6.7	1	5.6	2	6.1
Missing Data	71	--	60	--	131	--
		100.0		100.0		100.0

TABLE 28

FREQUENCIES FOR THEMES OF READING/LEARNING MATERIALS FOR MINOR DATA GROUP BY SCHOOL

	ARMENIAN (n=27)		GREEK (n=53)		TOTAL (n=80)	
	f	%	f	%	f	%
Themes of Reading/Learning Materials						
Ethnic						
Religious Holy Day	2	100.0	3	25.0	5	35.7
Other	0	0	5	41.7	5	35.7
Non-Ethnic/Both						
National Holiday	0	0	1	8.3	1	7.1
Rural Community	0	0	1	8.3	1	7.1
Other	0	0	2	16.7	2	14.3
Missing Data	25	--	41	--	66	--
		100.0		100.0		100.0

9. Unobtrusive Measures of Reading Materials

9.1 To what extent did eight unobtrusive measures of reading/learning materials occur across the sample?

Unobtrusive measures were considered separately from cases having "Subjects of learning" so those PO's fell into the minor data group. Only 14 occurrences of "Unobtrusive measures of reading/learning materials" were cited; nine from the Armenian School (64.3%) and five from the Greek School (35.7%) (Table 29, p. 140). The major occurrences noted for the variable consisted of two "other" categories; one for non-ethnic/English language charts and posters (50.0%) and the other for incidental-non-ethnic/English language materials (57.1%). Both commercially prepared charts and posters and incidental non-ethnic/English language materials occurred to a considerable extent less frequently (35.7% and 42.9%, respectively).

The findings appear to support the idea that there were more non-commercial unobtrusive measures present in the two schools of the study.

TABLE 29
FREQUENCIES FOR UNOBTRUSIVE MEASURES OF READING/LEARNING MATERIALS FOR MINOR DATA GROUP BY SCHOOL

	ARMENIAN (n=27)		GREEK (n=53)		TOTAL (n=80)	
	f	%	f	%	f	%
Unobtrusive Measures of Reading/Learning Materials(a)						
Missing Data	18 (n=9)	--	48 (n=5)	--	66 (n=14)	--
Charts & Posters						
Commer./ET/Non-Ethnic	1	11.1	0	0	1	7.1
Commer./Eng./Ethnic	1	11.1	0	0	1	7.1
Commer./Eng./Non-Ethnic	3	33.3	2	40.0	5	35.7
Other/ET/Non-Ethnic	3	33.3	0	0	3	21.4
Other/Eng./Non-Ethnic	4	44.4	3	60.0	7	50.0
Incidental						
Commer/Eng./Non-Ethnic	5	55.6	1	20.0	6	42.9
Other/ET/Non-Ethnic	1	11.1	0	0	1	7.1
Other/Eng./Non-Ethnic	4	44.4	4	80.0	8	57.1

(a) Each variable in this group was coded (1) if it occurred and (0) if it did not occur. (If no occurrences were coded for any of the variables in the group all items in the group were considered missing.) Frequencies are reported only for occurrences.

10. Multivariate Analyses

How do reading acquisition and pedagogical variables interrelate with one another?

As described in Chapter II in "Dimensions of 'Desirability' of the Initial Reading Acquisition Process" (pp. 48-50) it was of special interest to the researcher to examine some of Chall's concepts (1967, 1983) about initial reading acquisition in relation to the other pedagogical factors of this study. Chall suggested that a "code-emphasis method...i.e., one that views beginning reading as essentially different from mature reading and emphasizes learning of the printed code," is more appropriate at initial reading levels (1967, p. 307). She also suggested that oral reading was essential for the initial reading process. This emphasis was represented in the present study by five methods and four strategies: (1) Methods; alphabet recognition, alphabet spelling, systematic phonics, word families and syllables; (2) Strategies; round robin or circle, choral, modified echo, and individual oral. Two multivariate procedures - stepwise regression and factor analysis - were used for a more comprehensive and parsimonious examination of the interrelationships among these nine Chall variables and 29 other reading acquisition and pedagogical variables.

These analyses must be considered exploratory because of two limitations. The first is that almost all variables were dichotomous and not normally distributed. The second is that a subsample, having no missing data across all variables, was used so that all correlations were based on

the same sample of observations (i.e., listwise deletion of cases was used); there were only 47 such cases.

The Subsample

The subsample of 47 cases on which the two multivariate analyses were performed was compared to the remaining 117 cases of the study sample on four major characteristics. The subsample had a disproportionately large percentage of observations from the Greek School (66.0%) compared to 47.6% of the total sample of 164, and 40.2% of the cases excluded for missing data. However, the subsample did not differ from the remainder of the study sample on grade levels. The subsample had a disproportionately large number of cases where English reading occurred (63.8%) compared to 32.9% of the study sample and 20.5% of the excluded cases. The subsample did not differ from the excluded cases in which ET reading occurred.

The Variables

The nine Chall variables were used in the analyses with 29 other variables. One variable, "Class size", was an interval measure. Three were ordinal: "Grade level", "Study year", and "Time" (progression) into school year. Nineteen were pedagogical factors that were coded dichotomously as present (1) or absent (2):

Actual subject(s) of learning
English language in general
ET language in general
English reading
ET reading

English writing
ET writing
English speaking
ET speaking

Methods of teaching initial reading
(Analytic) whole words
(Analytic) sentences
(Analytic) intrinsic phonics

Approaches to initial reading/learning
Experiential
Basal reader

Preparation/sources of materials
Commercial Texts: ethnic country
Commercial Texts: United States/non-ethnic auspices
Commercially prepared workbook(s)/sheets
Calendars, charts, posters
Blackboard

Units of in-class reading/learning
Small groups

"School" was represented by a single dichotomous variable (Armenian=1, Greek=0), as was "Teacher" (homeroom teacher=1, special subject teacher=0). "Language used in actual subject(s) of learning" was entered as four dummy variables: "English only", "ET only", "both neutrally", "both with one aiding". Means and standard deviations for all variables are presented in Table 30, p.151. The correlation matrix on which the factor analyses were based is presented in Appendix VII.

A large number of variables were excluded because there was no variance on them in this subsample, (actual subject(s) of learning, other academic/ethnic and non-academic/non-ethnic; approaches, individualized; strategies, oral/other and silent/other; preparations/sources, teacher prepared text and books other than textbooks), or because they were extremely skewed, i.e., they occurred in more than 90% of the cases (unit, the

entire class) or less than 10% of the cases (actual subject(s) of learning, other academic/non-ethnic and non-academic/ethnic; methods, phrases; units, individual and seat work; approaches, other; strategies, silent/direct class or group and individual; preparations/sources, commercial text/United States under ethnic auspices, teacher prepared workbook(s)/worksheet(s); and other preparations).

10.1 What variables best predict the occurrence of a constellation of methods and strategies emphasized by Chall?

For purposes of the regression analysis the researcher conceptualized a single variable as the measure of the degree of a Chall emphasis, operationalized as a count of how many of the nine previously described variables occurred in a given observation.

A step-wise regression (Nie et. al., 1975, p. 320f) was performed using the Chall emphasis as the dependent variable, with the 29 other variables. The summary table for this regression is presented in Table 31A (p. 153). There were eight variables that each contributed 2% or more of the variance (R^2 change $\geq .02$), totalling 52% of variance: "Level" (.16), "School" (.07), "Ethnic Tongue only" as language used (.04), "Blackboard" as a preparation/source (.05), "Experimental" approach (.08), "Sentence" method (.04), "English language in general" as an actual subject of learning (.03), "Basal reader" approach (.02). All but one of these variables - "Blackboard" as a preparation/

source - was negatively associated with the Chall emphasis.

Because the "School" variable was most strongly related to "Class size" (r=.89), "School" was omitted from a second regression with the results virtually unchanged other than the "Class size" variable being entered at the second step instead of "School" (Table 31B, p. 153).

Given the preponderance of negative correlations appearing in these regressions, it would appear that a lower grade level, a larger class size, and the absence of the other variables were predictive of greater overall usage of the Chall emphasized methods and strategies and accounted for 45-48% of the variation in such usage. However, the following factor analysis revealed: (1) that the Chall measure was not unidimensional and therefore not a valid measure; (2) that the nine variables used to construct the measure were in some instances negatively related to each other, in other instances were independent of one another; and (3) that, with the independent variables which accounted for the overall variance, they were actually four independent dimensions. Therefore, no further interpretation of the regressions were attempted.

10.2 What are the dimensions underlying the reading acquisition and pedagogical variables?

Although a unitary Chall emphasis might be conceptually valid, it was also considered possible that the Chall variables might not function as one unidimensional variable. Thus,

the nine individual Chall variables were included in an exploratory factor analysis with the other 29 variables. (Ideally such an analysis would be performed using a minimum of four cases per variable; or 152 cases, rather than the present 47 cases). The 38 variables were subjected to a principal axes factor analysis with iteration and varimax orthonal rotation, using the maximum off-diagonal element of the correlation matrix as the initial estimate of communality (Nie et al., 1975, p. 480). There were 12 factors having eigenvalues greater than one. Eight of these factors had fewer than three items with significant loadings (.40 or greater). Four factors were rotated and the resulting factor matrix is presented in Table 32 (p. 154) with variable communalities. The factor array (variables loading .40 or greater) for the four factors is presented in Table 33 (p. 155). Six variables did not have loadings $\geq .40$ on any factor: two Chall variables, the "Systematic phonics" method and the oral reading strategy of "Choral reading"; two analytic methods, "Intrinsic phonics" and "Whole words"; "Time of year" and "Study year". Three variables with loadings $\leq .40$ - the "Small group" as a unit of in-class reading activity, "English speaking" as actual subject of learning, and "Sentences" as a method of teaching initial reading - were excluded from the factor array and the subsequent discussion because the square of the largest loading did not exceed the sum of the squared loadings on the other three factors. One variable "Commercial texts of the United States under non-ethnic auspices", had two

loadings $\leq$.40. Since the square of its loadings on Factor 1 exceeded the sum of squared loadings on the other three factors, it was included in Factor 1.

The first factor named "English Reading", with an eigenvalue of 7.82, accounted for 47.4% of the common variance. It was characterized by its highest loading items: "Ethnic tongue reading" (-.972), "Homeroom teacher" (.972), "English reading" (.945), "Commercial Text from the ethnic country" (-.808) and "English only language used" (.719). Although "English reading" as the actual subject of learning and "Homeroom teacher" loaded with equal strength, the factor was named for the variable of major interest in the study: "English reading". Thus this cluster of items seems to represent a dimension of variables that are strongly associated with "English reading", as actual subject of learning, "Homeroom teacher" rather than "Special subject teacher", the absence of "ET reading" and "Commercial texts from the ethnic country", and the use of "English language only". Two of the Chall variables were associated with this dimension, although less strongly: the absence of the "Syllable" method (-.535), and the use of the "Word families" method (.433). Also associated with this dimension were "Commercially prepared texts published in the United States under non-ethnic auspices" (.575) and "Commercially prepared workbook(s)/worksheet(s) (.437) and "English Writing" (.424), the absence of ethnic tongue "Language in general" (-.550), "Speaking" (-.549), "Writing" (-532) as actual subject(s) of learning and of the use of

the "Ethnic tongue" (-.472), and the use of both "English and the Ethnic tongue neither aiding or interfering" (.405).

The unidimensionality of these variables suggests that English reading and English writing as actual subjects of learning, under the homeroom teacher, using English only as the language of instruction, commercially prepared texts published in the United States under non-ethnic auspices and workbook(s)/worksheet(s), and the word family method are all positively related to each other. They are negatively related to the subjects of ET speaking , writing and language in general, the use of texts commercially prepared in the ethnic country, of ET as the language of instruction and of the syllable method. It further suggests that the occurrence of variables constituting this pedagogical dimension are independent of or unrelated to the other three dimensions identified in these results: "Class Size", "Experiential Approach", and "Grade Level".

The second factor named "Class Size", had an eigenvalue of 3.49 and accounted for 21.1% of the common variance. It was characterized by its highest loading items: "Class Size" (.897), and "School" (-.894).* (The Armenian School had smaller classes than the Greek School to such an extent that class size was the major variable characterizing the school differences.) Positively associated with the "Class size" dimension was one Chall variable, the "Modified echo" strategy.

*1=Armenian, 0=Greek

Two variables were negatively related to this dimension; i.e. their use was less with larger class size: both "English and the Ethnic Tongue used in an aiding manner" (-.460) and one Chall variable, the "Individualized Oral" strategy (-.422).

The third factor named "Experiential Approach", with an eigenvalue of 2.83, accounted for 17.2% of the common variance. It was characterized by its highest loading items: "Basal reader" (-.824) and the "Experiential approach" (.799). Two variables were positively associated with the use of the "Experiential Approach" dimension: "English language in general" as actual subject of learning (.583) and the use of the "Blackboard" as a preparation/source of materials (.405).

The fourth factor named "Grade level", had an eigenvalue of 2.36 and accounted for 14.3% of the common variance. It was characterized by its highest loading item which was "Level" (.627). Two Chall variables were positively associated with this factor: "Alphabet Spelling" as a method (.581) and "Round robin" as a strategy (.403). Two variables were negatively associated with the "Grade level" dimension, occurring less as level advanced: "Alphabet recognition", a Chall variable (-.551), and use of "Calendars, Charts and posters" (-.501).

In summary the factor analysis, although exploratory in nature, suggested four independent dimensions of pedagogical variables. The first, "English Reading", consisted predominantly of actual subjects of learning, with "Ethnic Tongue reading" negatively loading on the factor. Two Chall variables

loaded on this factor: the "Word Family" method (positive) and the "Syllable" method (negative).

The second dimension, "Class Size" included two Chall variables; (both strategies), "Modified echo" (positive) and "Individual oral" (negative).

The third dimension, "Experiential Approach", included one actual subject of learning, "English language in general" and the use of the "Blackboard" as preparation/source. The "Basal reader" approach was negative to this factor. No Chall variables were related to this factor.

The fourth dimension, "Grade Level", included three Chall variables, with the "Alphabet spelling" method and the "Round robin" strategy loading positively and the "Alphabet recognition" method loading negatively .

Two Chall variables, "Systematic Phonics" method and "Choral reading" strategy, did not load on any factor.

TABLE 30

MEANS AND STANDARD DEVIATIONS FOR 38 VARIABLES IN REGRESSION AND FACTOR ANALYSIS (n-47)

Variables	Possible Range	Mean (a)	S.D.
Chall Items:			
(Methods of Teaching)			
Alphabet Recognition	0-1	0.36	0.49
Alphabet Spelling	0-1	0.36	0.49
System. Phonics	0-1	0.26	0.44
Word Families	0-1	0.28	0.45
Syllables	0-1	0.13	0.34
(Reading Strategies)			
Round Robin	0-1	0.15	0.36
Choral	0-1	0.32	0.47
Mod. "Echo"	0-1	0.40	0.50
Ind. Oral	0-1	0.38	0.49
Class Size	10-37	23.17	7.82
Grade Level	0-2	1.11	0.63
Study Year	1-2	1.19	0.40
Time in School Year	1-3	1.51	0.59
Subject of Actual Learning			
English Lang. in General	0-1	0.15	0.36
ET Lang. in General	0-1	0.17	0.38
Reading English	0-1	0.64	0.49
Reading ET	0-1	0.38	0.49
Writing English	0-1	0.26	0.44
Writing ET	0-1	0.13	0.34
Speaking English	0-1	0.21	0.41
Speaking ET	0-1	0.11	0.31
Methods of Teaching			
Whole Words	0-1	0.38	0.49
Sentences	0-1	0.55	0.50
Intrinsic Phonics	0-1	0.15	0.36
Approaches to Reading			
Experiential	0-1	0.13	0.34
Basal Reader	0-1	0.81	0.40
Preparation of Materials			
Com.Text/Ethnic Country	0-1	0.28	0.45
Com.Text/U.S.,Non Ethnic	0-1	0.32	0.47
Com. Wkbks, Wksheets	0-1	0.40	0.50
Calendars, Chts., Posters	0-1	0.15	0.36
Blackboard	0-1	0.49	0.51

(a) Mean for dichotomous and dummy variables; i.e., those having a range of 0-1, can be interpreted as percentage of observations in which the variable occurred.

TABLE 30

MEANS AND STANDARD DEVIATIONS FOR 38 VARIABLES IN REGRESSION AND FACTOR ANALYSIS (n=47)

(continued)

Variables	Possible Range	Mean (a)	S.D.
Unit of Reading Activity			
Small Group	0-1	0.13	0.34
School	0-1	0.34	0.48
Teacher	0-1	0.62	0.49
Language Used in Actual Subject of Learning			
English Only	0-1	0.45	0.50
ET Only	0-1	0.13	0.34
Both Used Neutrally	0-1	0.23	0.43
Both Used, One Aiding	0-1	0.19	0.40

(a) Mean for dichotomous and dummy variables; i.e., those having a range of 0-1, can be interpreted as percentage of observations in which the variable occurred.

TABLE 31

SUMMARY TABLE FOR STEPWISE REGRESSIONS OF PEDAGOGICAL VARIABLES WITH CHALL MEASURE (n=47)

A. With "School" Included

Variable	Multiple R	R^2	R^2 Change	r	B	Beta
Level	.39	.15	.15	-.39	-.058	.031
School[a]	.47	.22	.07	-.21	-2.011	.837
Lang. Uses: ET	.51	.26	.04	-.21	-.819	.240
Prep./Blkbd.	.55	.31	.05	.27	1.053	.462
App./Experiential	.62	.39	.08	-.10	-2.161	.634
Meth./Sentence	.66	.43	.04	-.25	-1.069	.467
Actual Subj./Eng. Lang. Gen.	.68	.46	.03	-.08	-1.104	.346
App./Basal Read.	.70	.48	.02	-.06	-1.231	.426

[a] Armenian=1, Greek=0

B. With "School" Excluded

Variable	Multiple R	R^2	R^2 Change	r	B	Beta
Level	.39	.15	.15	-.39	.238	.130
Class Size	.46	.21	.05	.22	.010	.066
Lang. Used: ET	.49	.24	.03	-.21	-.675	-.198
Prep./Blkbd.	.53	.28	.04	.27	1.119	.491
App./Experiential	.61	.37	.09	-.10	-2.571	-.754
Meth./Sentence	.63	.40	.03	-.25	-.758	-.331
Actual Subj./Eng. Lang. Gen.	.64	.42	.02	-.08	-1.157	-.362
App./Basal Read.	.67	.45	.03	-.06	-1.456	-.503

TABLE 32

VARIMAX ROTATED FACTOR MATRIX FOR NINE CHALL VARIABLES

AND 29 PEDAGOGICAL VARIABLES, WITH COMMUNALITIES (n=47)

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Communality
Method: Alphabet Recognition	-.030	.010	.030	-.551	.306
Method: Alphabet Spelling	.373	.071	.026	.581	.483
Method: Systematic Phonics	-.121	.053	.008	-.290	.102
Method: Word Families	.433	-.238	-.127	.135	.278
Method: Syllables	-.535	-.013	-.051	.141	.310
Strategies: Round Robin	.280	.254	.112	.403	.318
Strategies: Choral	-.271	.181	.039	-.339	.223
Strategies: Modified Echo	.079	.406	-.103	.183	.215
Strategies: Individual Oral	.107	-.122	.048	.064	.196
School	.068	-.894	.002	.231	.857
Level	-.341	.232	-.179	.627	.595
Actual Subject: English Language Gen.	.284	.015	.583	.090	.429
Actual Subject: ET Language Gen.	-.550	-.292	.078	.232	.417
Actual Subject: English Reading	.945	.052	.045	-.107	.909
Actual Subject: ET Reading	-.972	-.014	-.066	.135	.967
Actual Subject: English Writing	.424	.037	.326	.234	.288
Actual Subject: ET Writing	-.532	.086	-.070	-.040	.297
Actual Subject: English Speaking	.369	.252	.399	.244	.418
Actual Subject: ET Speaking	-.549	.118	.007	-.043	.316
Method: Whole Words	.005	.317	.078	.361	.237
Method: Sentences	-.339	.439	.003	.419	.482
Method: Intrinsic Phonics	.288	.289	.098	.181	.209
Unit: Small Groups	.331	-.512	-.153	.089	.613
Approach: Experiential	.117	-.285	.790	.013	.734
Approach: Basal Reading	-.179	.215	-.824	.185	.792
Preparation: Comm. Text/Eth. Country	-.808	.256	-.130	-.104	.747
Preparation: Comm. Text/U.S. Non-Ethnic	.575	-.130	-.475	.139	.593
Preparation: Comm. Wkbks., Sheets	.437	.120	-.041	-.271	.280
Preparation: Calendars, Chts., Posters	.286	-.089	.026	-.501	.341
Preparation: Blackboard	-.147	.082	.405	-.061	.196
Study Year	-.062	.241	-.173	.205	.134
Time of Year	-.005	-.018	-.225	.249	.113
Class Size	-.134	.897	.085	-.236	.885
Language Used: English	.719	.125	.059	.058	.540
Language Used: ET	-.472	0.183	-.108	-.105	.279
Language Used: Neutral	-.405	.158	-.019	.052	.192
Language Used: Aiding	-.052	-.460	.035	-.036	.217
Class Teacher	.972	.014	.066	-.135	.967
Eigen Value	7.82	3.49	2.83	2.36	
% of Common Variance	47.40	21.10	17.20	14.30	

TABLE 33

FACTOR ARRAY FOR FOUR DIMENSIONS OF PEDAGOGICAL VARIABLES

Loading	Description
	Factor 1 - (English Reading)
.972	Homeroom Teacher Teaching
-.972	Actual Subject: ET Reading
.945	Actual Subject: English Reading
-.808	Preparation: Commercial Text/Ethnic Country
.719	Language Used: English
.575	Preparation: Commercial Text/U.S., Non-Ethnic
-.550	Actual Subject: ET Language in General
-.549	Actual Subject: ET Speaking
-.535	*Method: Syllables
-.532	Actual Subject: ET Writing
-.472	Language Used: ET
.437	Preparation: Commercial, Workbooks, Sheets
.433	*Method: Word Families
.424	Actual Subject: English Writing
.405	Language Used: Neutral
	Factor 2 - (Class Size)
.897	Class Size
-.894	School
-.460	Language Used: Eng. & ET Neutral
-.422	*Strategies: Individual Oral
.406	*Strategies: Modified "Echo"
	Factor 3 - (Experiential Approach)
-.824	Approach: Basal Reader
.799	Approach: Experiential
.583	Actual Subject: English Language in General
.405	Preparation: Blackboard
	Factor 4 - (Grade Level)
.627	Level
.581	*Method: Alphabet Spelling
-.551	*Method: Alphabet Recognition
-.501	Preparation: Calendars, Charts, Posters
.403	*Strategies: Round Robin

* Chall Variables

11. Out of class Biliteracy Acquisition and Related Variables

What were the most prominent of the variables that were observed qualitatively?

In spite of the debate in the literature as to the best environments for learning a second language (see Krashen, 1976), Fishman et al., (Final Report, Part II, 1982) found little evidence of out-of-school influences on the biliteracy acquisition process (p. 22). However, such findings regarding the dependency on the school, rather than the community, "for literacy acquisition "... may well be a reflection of observer/ethnographer interest, which was primarily school based." (p. 37).

Although out-of-class variables were too few to quantify, the protocols suggested the existence of several variables described here but that should be systematically examined in future studies: ET acquisition in but after school; English acquisition for ESL students; parental integrative motivation; cultural congruence of in-school (teacher) and out-of-school (community).

ET Acquisition In but After School

The Armenian School had Saturday and Sunday school programs for the youngsters who attended the school and for other children from the community. "The same textbooks as are in the day school are used in the Saturday and Sunday school. However, the ability levels are different. Children in the Saturday and Sunday school program are grouped accord-

ing to chronological age and often third and fourth graders in the Saturday and Sunday school are reading at the first grade level. Every Saturday and Sunday school teacher sends an Armenian child to read at Sunday school Church services" (Interview with Armenian teacher, Protocol Observation #11, 1980).

Many of the Greek families who lived in the community could not afford the Greek day school tuition. Therefore, the day school had an extensive after-school Greek language program for youngsters who attended the regular public school. "After-school youngsters in the afternoon programs seem to move ahead much faster in Greek than day school students." This may be because "most children attending the after-school program usually have just come from overseas". (Interview with first grade English teacher, Protocol Observation #134, 1980).

Pedagogical and reading acquisition variables were not observed in the after-school programs. After-school programs should be compared with day school on these variables as well as proficiency.

English Acquisition for ESL Students in and out of School

There was no ESL person assigned to assist non-English speaking youngsters at the Armenian School. The principal took ESL students to a resource room at a nearby public school once a week.

At the Greek School, Non-English speaking children in kindergarten through the third grade received Title I, English-as-a-second-language help, three times a week by an ESL teacher

who was assigned to the school by the Board of Education.

Parental Motivation

Schumann postulated that motivation is one of the affective factors that influences second-language learning (1978, p. 32). In this study, although there was little evidence of out-of-school co-participation in the literacy acquisition process, there was evidence of integrative motivation (Gardener & Lambert, 1972) for learning English on the part of the students' parents.

When Armenians socialize, usually with others from the same European locals, they often speak the language of that locale (e.g. Russia, Turkey) rather than Armenian. Similarly, many of the parents are more comfortable with speaking that language than with Armenian. However, most parents, although not proficient enough to help their children, want them to learn English. Some of the parents learn English on their jobs and some take English classes given by the Armenian Benevolent Association (Protocol Observation #35), so they can help assist their children in learning English.

The parent population of 80-85% of the Greek School's students was non-English speaking and predominantly new arrivals to the United States (Protocol Observation #113, 1979). These parents, "...would prefer an all-Greek Program with intensive curriculum in Greek studies and minor involvement in English." However, most all the students attending

the Greek School do not go on to further their Greek education after they graduate from eighth grade. Competition to get into special English high schools is very keen and parents expect alot from their children. Since families know each other, competition for good grades and for entrance into "good" English high schools is encouranged by parents (Protocol Observation #126). "All the Greek parents want their children to be the best that they can, they will run out and get anything that you may request so that the children will be able to move ahead" (Interview with second grade English teacher, Protocol Observation #152). One student's mother asked the second grade English teacher to translate the English homework into Greek so her child could explain the assignment to her and she could help him with his English assignments (she only spoke Greek) (Protocol Observation #154).

Cultural Congruence and Attitudes

The studies reported by Rincon and Ray (1975), Gardner and Lambert (1972), Anderson (1974), and the Ann Arbor Decision (1979), were directed at the need for positive attitudes on the part of teachers towards non-native speaking students "...if a teacher understands the home culture and home language of a child, he can increase his effectiveness and exercise an understanding towards a successful bilingual/bi-cultural program" (Anderson, 1974). At both of the schools in the study, most teachers in the primary grades were of the same ethnic backgrounds as the students. Those that weren't often

conferred with the ethnic background teachers to share ideas and relate occurrences between teacher and student that might require an ethnically oriented "interpretation". Exemplifying this, the faculty at the Greek School reportedly considered themselves a "close knit family" (Protocol Observation #120). The teachers worked together to help each other and help the children learn in both English and the ethnic tongue. "The English teacher commented that some of the children were having a problem learning a sound in Greek. The English teacher helped the Greek teacher by showing the students how the English 'sound' was similar to the 'sound' in Greek. After that explanation, the children didn't have any further difficulty" (Protocol Observation #120).

The foregoing were examples of out-of-class "variables" that were observed but not quantified.

* * *

The findings presented in the preceding sections are summarized in Chapter V, and the possible meanings discussed, followed by implications for reading education and administration, and suggestions for future research.

CHAPTER V

DISCUSSION OF MAJOR FINDINGS

This research study focused on initial reading acquisition in English and in the ethnic tongue and on associated pedagogical variables in 164 observations at two schools (Armenian and Greek) purported to be representative of an (im)migration based biliteracy tradition. Significant results from the analysis of the data were presented in relation to ethnographically derived research questions (See Chapter III, pp. 84-86).

Based on these ethnographic research findings certain conjectures can be made about the process of biliteracy acquisition across the primary grade levels (Nursery-Grade 1) in the two study schools. The following summary and related discussion sections are numbered to correspond with major question and findings sections in Chapter IV. Possible implications for reading education and administration follow, as well as suggestions for further research.

Summary of Major Findings

1. Reading English and the Ethnic Tongue (ET):

   1.1a As independent actual subjects of learning, reading of English and of the ethnic tongue occurred to a similar extent.

   1.1b As subjects of learning, reading of both languages actually occurred more than they were intended.

1.1c English and ET reading occurred to a greater extent than writing or language skills in general.

1.2 The schools were not similar in regard to reading English and ET. In the Greek School, English reading was intended more in the nursery/kindergarten and it actually happened. Reading ET was intended more in the Armenian second grade and it did not actually occur.

2. Language Used in Learning:

2.1 English and the ethnic tongue as the language used (medium of learning) occurred alone in approximately one-quarter each of the observations.

2.2a The English language alone was used almost twice as much in English reading, while the use of both languages (English and the ethnic tongue) occurred almost as frequently as the use of the ethnic tongue language used alone in ET reading.

2.2b When both languages were used they were used in an aiding or neutral manner.

2.3 Use of both languages in a neutral manner occurred more in the Greek second grade.

3. Methods of Teaching Reading:

3.2 Only synthetic (decoding) methods were significantly associated with English and ET initial reading acquisition; alphabet spelling and word families with reading English and the syllable method with reading ET.

3.3a Alphabet recognition and alphabet spelling (synthetic) occurred to a greater extent in the nursery/kindergarten while sentence reading (analytic) predominated at the second grade level.

3.3b The analytic method of sentence reading predominated at the Greek School at the second grade level.

4. Reading Strategies:

4.1 Oral reading strategies predominated at both schools.

4.3a Group oral reading strategies of choral reading and modified "echo" occurred more at the Greek School.

4.3b The individual oral strategy occurred more at the Armenian School.

5. Approaches to Teaching Reading:

5.1 The basal reader was the prevailing approach used regardless of English or ET reading.

5.3 The basal reader was used much less in the nursery/kindergarten.

6. Units of In-Class Reading:

6.1 The entire class was the most frequently occurring unit.

6.3 The entire class unit occurred more in the Greek School.

7. Preparation/Source of Reading/Learning Materials:

7.1 The blackboard was the most frequently occurring preparation/source of materials.

7.2a Associated with reading English were commercially prepared textbooks published in the United States under non-ethnic auspicies and commercially prepared

workbooks and worksheets.

7.2b Associated with reading ET were commercially prepared textbooks published in the United States under ethnic auspicies and commercial texts published in the ethnic country.

7.3a Commercial textbooks published in the United States under ethnic auspicies were used to a greater extent in the Armenian school.

7.3b Commercial texts published in the ethnic country were used to a greater extent in the Greek first and second grades.

8. Themes of Materials:

8.1 The two predominant categories were urban and rural themes.

9. Unobtrusive Measures of Reading Materials:

9.1 The findings suggest the presence of more non-commercial unobtrusive measures.

10. Exploratory Multivariate Analyses:

10.1 The "School" variable functioned the same as the "Class size" variable in the regression analyses.

10.2 Relationships do exist among reading and process variables, suggesting four independent dimensions of the initial reading acquisition process: English reading, Class size, Experiential approach, Grade level.

10.2a The Chall-emphasized methods and strategies did not constitute a unitary dimension.

10.2b Synthetic (decoding) methods were positively related to reading and grade level.

10.2c Reading strategies were related to class size.

11. Out-of-Class Related Variables:

Ethnographic observations confirmed the occurrence of out-of-class variables that influenced the initial reading acquisition process.

Discussion of Major Findings

1. Reading English and ET

(1.1) As independent actual subjects of learning, reading of English and of the ethnic tongue occurred to a similar extent. Reading of both languages as an intended subject of learning was found to occur to a lesser extent than reading as an actual subject did suggesting that reading actually occurred when other subjects of learning were intended. The findings of this study seem to indicate that the students in these two bilingual programs were actually reading more than their explicit curricula suggested.

The belief articulated by the present federal administration that bilingual programs, dedicated to preserving a student's native language in the classroom, interfere with the acquisition of English literacy skills (Daley, 1983; Holsendolf, 1982) does not seem to be supported by the findings of this study. In fact, the use of more reading in both languages may enhance the acquisition of English literacy.

According to this research, English and ET reading

occurred to a greater extent than writing or language skills in general. This study suggests that the traditional belief that formal reading acquisition should be built on oral language skills may not necessarily have to be so. Perhaps Week's opinion (1979), that early emphasis on acquisition of reading can enrich the "total language base" (other language skills) by increasing a reader's vocabulary and by providing different opportunities for children to encounter different sentence structures in reading than in speech, is a viable alternative to present pedagogical policies.

(1.2) The schools were not similar in regard to reading English, although they were purported to be representative of a similar biliteracy tradition (immigration based). There appears to be a clear policy in the Greek School regarding reading English; English reading was intended more in the nursery/kindergarten and that was what actually happened. Although both schools were representative of (im)migration based bilingualism, the Greek School was much more impacted by a recent large stable immigration. This may also explain why the Greek School gave greater emphasis to English.

On reading ET as the intended and actual subject of learning, it appears that the Armenian School, as a whole, was similar to the Greek. However, reading ET was intended more in the Armenian second grade. Apparently, the intention to do more Armenian reading in the second grade was not actually occurring.

In light of these findings one cannot assume that bilingual curricula reflect language acquisition as it actually occurs in the classroom. This suggests a need for the documentation of clearly stated pedagogical policies regarding the implementation of curricula actually used for bilingual acquisition programs.

2. Language Used in Learning

(2.1) English and the ethnic tongue as the language used (medium of learning) occurred alone in approximately one-quarter each of the observations.

(2.2) However, the English language alone was used almost twice as much in English reading than the ethnic tongue alone was used in ET reading. In ET reading, the use of both languages (English and the ethnic tongue) in a neutral manner occurred almost as frequently as the use of the ethnic tongue language alone. In the vast majority of the cases where both languages were used it was in an aiding or neutral manner.

(2.3) The use of both languages in a neutral manner was apparently occurring more in the Greek second grade. The school, although representative of a similar biliteracy tradition (immigration based), did not have the same patterns of language use. One cannot generalize a grade-related increase in the use of the ethnic tongue language alone. The by-school/by-grade-level analyses revealed that the ethnic tongue used alone occurred in approximately 20% of the cases in the Armenian nursery, one kindergarten, both first grades, and the Greek second grade.

The research and theories on language acquisition as related to bilingualism are primarily associated with the "degree" of proficiency a person may have in either L_1 and/or L_2 (Cummins 1979, 1981). In the present study no assumptions could be made as to which language was L_1 or L_2. In addition, there was no data available on level of proficiency in either language.

The present study findings seem to be consistent with those in the Significant Bilingual Instructional Features Study (Fisher and Guthrie, 1983) where English was assumed to be L_2 (although proficiency data were not presented). In that study, "English was used by instructors approximately 70 percent of the time...."(p. iii).

Some proponents of bilingual/bicultural programs believe that literacy training should be started in a student's native language and simultaneously be introduced to English, or a second language, so that he can learn to be literate in both languages (Balinsky and Peng, 1974; Lambert and Tucker, 1972; Montoya, 1975). In planning biliteracy programs it is important that educational administrators, curriculum specialists and researchers carefully document the L_1-L_2 variations in their programs and studies. It may be tempting to make assumptions about "L_1" in the expediency of establishing an "ideal," or politically or fiscally advantageous, program. Whether such programs are educationally advantageous cannot be adequately assessed until proficiency results of such programs are considered in relation to actual L_1-L_2 variation

and how the languages are used in instruction in reading acquisition for both languages. Most standardized reading tests in assumed L_1 (ethnic tongue) are in Spanish. There is a need to develop tests in other languages if a true assessment is to be made of L_1 proficiency.

3. Methods of Teaching Initial Reading

(3.2) Only "decoding" (synthetic) methods of teaching initial reading were significantly associated with initial reading acquisition in both English and the ethnic tongue. Alphabet spelling and word families were significantly associated with reading English. The syllables method was associated with reading in the ethnic tongue.

The positive associations of English reading with the methods of alphabet spelling and word families may be a result of the overwhelming use of basal readers for initial reading lessons (76.6%, See "Approaches" Section). Chall (1983) found that basal readers included more "decoding" methodology in their teachers' manuals and workbooks. The emphasis on the use of syllabication as a method of teaching initial ET reading may well be a reflection of the phonetic nature of both the Armenian and Greek languages which have a greater grapheme/phoneme correspondence than does English. In addition, the emphasis on syllabication for teaching ET reading may be the result of a desire on the part of ethnic tongue teachers to maintain a continuity of traditional, home-country methodology while living in the diaspora. Such consistent use of synthetic methods was noted by Fishman et

al., (1982), who suggested such usage may reflect a combination of "...an American influenced back to basics emphasis" and "...a continuation of traditional, classical, old world pedagogic emphasis" (Final Report, Part II, 1982, pp. 13, 14).

(3.3) Alphabet recognition and alphabet spelling (synthetic) occurred to a greater extent in the nursery/kindergarten while sentence reading (analytic) predominated at the second grade level. These findings appear to substantiate a greater emphasis on decoding (synthetic) methods at the beginning reading levels. It tends to support Chall's contentions that a "code-emphasis method . . . i.e., one that views beginning reading as essentially different from mature reading and emphasizes learning of the printed code" is more appropriate at those levels (1967, p. 307), a position more recently voiced by Adams, Anderson and Durkin (1984), Gonzalez (1984), and Ehri and Wilce (1985). In addition, these findings are consistent with Fishman et al.'s findings that the synthetic method was primarily implemented in nursery/kindergarten and first grade and that the sentence method (analytic) became very important in the second grade and is "...clearly a grade related phenomena rising consistently from grade to grade." (Final Report, Part II, 1982, p. 13).

Without proficiency data, these findings shed no light on the lingering debate by reading researchers and educators over which method, "decoding" (Flesch, 1955; Chall, 1967, 1983; Ehri and Wilce, 1985) or "meaning" (Smith, 1978; Goodman, 1982) is "best" for teaching initial reading skills.

4. Reading Strategies

(4.1) According to the present study, oral reading strategies predominated at both schools at the initial stages of reading instruction/reading acquisition.

(4.3) The group oral reading strategies of choral reading and modified "echo" occurred more at the Greek School while the individual oral strategy occurred more at the Armenian School.

These research findings are not consistent with Tierney et al.'s(1976) assertion that the most frequently used oral activity is "round robin". Rather the most frequent strategies were those described by Allen (1976) as choral reading, by Heckelman (1969) as "echo" reading, and the individual oral strategy.

These findings are consistent with Fishman et al.'s regarding the choral reading strategy predominating at the Greek School. The overwhelming use of group oral strategies (choral and modified "echo") at the Greek School and individual oral at the Armenian might be attributed to class size, since it would be difficult to use individual strategies in the Greek School where class sizes were over 25 in kindergarten through grade two. In addition, these differences may actually reflect a particular preference perhaps characteristic of a specific cultural and/or school pedagogy.

Both schools manifested the use of oral reading which Chall considers essential for "unlocking" the printed word (1967). This finding corresponds with Chall's belief that

oral and articulatory responses by children should be an integral part of an initial reading program (1967, 1983) and fosters the development of meaningful reading, i.e., these schools tended to do what Chall recommended. This finding is also consistent with Masland's (1984) suggestion that teachers of reading in multi-ethnic classrooms accept and value the oral language of children that are bilingual. However, Adams, Anderson and Durkin (1984) have suggested a contrary view: that oral reading strategies can contribute to young readers' perception of reading as speaking to another rather than getting something from another. These findings suggest a need for further examination in both bilingual and monolingual reading programs.

5. Approaches to Teaching Initial Reading

(5.1) The research found an overwhelming reliance on the use of the basal reader as the approach used by classroom teachers regardless of English or ET reading as the subject of learning.

(5.3) Schools did not differ on approaches; however, the basal reader was used much less in the nursery/kindergarten.

The few occurrences of the experiential approach, as described by Storm & Smith (1930) and Lamoreaux and Lee (1943), suggested that it may be used to a greater extent in the nursery/kindergarten than in later grade levels.

Barton and Wilder (1964) found that basal readers were used over 90% of the time by first, second, and third grade teachers. Both Austin and Morrison's (1963) and Chall's

(1967) analyses also found basal readers used almost exclusively in initial reading programs, although their content and methodology were considered unsatisfactory for teaching initial reading skills.

This was substantiated in the present study where the use of the basal reader was the approach found to occur more frequently in the first and second grades. The overwhelming use of the basal reader as a "total reading program" leads this researcher to ponder about the extensive investment in "complete package approaches" to teaching reading on the part of educational administrators. Is the educational field, either monolingual or bilingual, relying on too much publisher prepared materials or is this a phenomena particular to the two sample schools?

5. Units of In-class Reading

(6.1) The entire class was the most frequently occurring unit of in-class reading/learning activity.

(6.3) This unit occurred more in the Greek School than in the Armenian School.

This finding may not reflect a pedagogical preference for particular units of in-class instruction for reading. It may instead be a practical consideration since classes in the Greek School were two to three times larger than in the Armenian School. However, it is this researcher's personal observation that the Greek classroom had an atmosphere suggestive of the "one-room schoolhouse" which, in fact, has been described by one administrator as being the case in many schools in Greece.

There seems to be no literature on units of in-class reading activities in bilingual classrooms. This suggests that the educational administrator and classroom teacher may need to be aware of not only of pedagogical and practical considerations for using a particular unit(s) of in-class reading activity, but of cultural considerations as well.

7. Preparation/Source of Reading/Learning Materials

(7.1) The most frequently occurring preparation/source of reading/learning materials was the use of the blackboard.

(7.2) The materials associated with reading English were commercially prepared textbooks published in the United States under non-ethnic auspices and commercially prepared workbooks and worksheets. The materials that were associated with reading ET were commercially prepared textbooks published in the United States under ethnic auspices.

(7.3) The commercial textbooks published in the United States under ethnic auspices were used to a greater extent in the Armenian School. This reliance on materials from the Armenian Archdiocese's central educational dissemination center may reflect an attempt to maintain the use of Eastern Armenian in the materials given to children. In regard to this, Fishman et al., noted that "Recently, two minor processes have begun to disturb the reliance of 'diaspora' schools on Eastern Armenian texts. First of all, a growing number of Soviet subsidized texts has been made available to the diaspora schools, some of these in Western Armenian. Secondly, a trickle of new arrivals has begun coming to the USA... from Soviet Armenia proper and, therefore, Western Armenian

speaking and reading" (1982, pp. 23, 24). The special subject ET teacher in the Armenian School said that the children found the basal readers and accompanying workbooks "colorful, interesting and enjoyable".

Commercial texts published in the ethnic country were found to be used to a greater extent in the Greek first and second grades. Although the Greek Archdiocese maintains a materials center, the special subject ET teachers at the Greek School preferred to order primary grade textbooks from Greece, despite the fact that they contained themes that depicted rural experiences because the content and skills material in the texts published under the Greek Archdiocese were too "babyish" for their students. The possible reasons for between school differences in the use of home country texts may be due to both political and dialectical ones. In addition Armenian schools in the diaspora are of different denominations whereas those at "home" are all of one denomination.

The materials used for English were plentiful and included several basal readers and supplemental series with accompanying workbooks, phonics series, and a reading skills development series which incorporated records and video materials.

These findings suggest three possibilities for educational administrators and reading specialists. 1) The reliance on the published materials may be a genuine reflection of teachers concerns for their respective students' interests, needs, and ability levels and not just a matter of convenience. 2) The use of these materials was a

manifestation of a particular "pedagogical philosophy" on the part of the schools where the choice of textbooks used was left to the professional and/or personal preference of the teachers. 3) The decision to select and use some texts were motivated by "political" consideration.

8. Themes of Materials Used for Reading/Learning Activity

(8.1) The two predominant categories of themes found in the reading materials used in the two schools were urban and rural themes. These findings are essentially consistent with Fishman et al.'s that the "...data reveal a decisive preponderance of non-ethnic topics" (Final Report, Part II, 1982, p. 24).

(8.2) The present study found no significant relationships between themes and reading English or reading ET as actual subject(s) of learning. There were four occurrences of ethnic related themes and these were reported in interviews and not directly observed.

Although the present researcher is aware of administrators in monolingual parochial schools who order parochial editions of basal readers (e.g. Scott Foresman's Catholic Editions) and other language acquisition texts because they contain religious themes, such themes were not noted in the parochial editions of texts used in the Armenian School for ET reading (see Preparations/Sources Section).

These findings were not consistent with Goodman's (1982) belief that reading material in early language instruction should "...focus on mundane situationally related language

such as signs, directions, descriptions, transcribed conversations, etc. (pp. 68-69).

However, the research seemed to be somewhat consistent with Chall's (1983) findings that material used for reading contained urban and suburban themes related to the lives of multi-ethnic, multiracial populations.

Perhaps the distribution of themes of reading materials in the two study schools "...is indicative of the fact that ethnic schools discharge a joint role: they ethnicize in an American way and they Americanize in an ethnic way" (Fishman, Gertner, Lowy and Milan, 1982).

9. Unobtrusive Measures of Reading Materials

(9.1) Although findings appear to support the idea that there were more non-commercial unobtrusive measures present in the two schools of the study, the number of cases and the nature of the categories assigned for unobtrusive measures requires further investigation. However, Webb et al., (1966) contended that there are many unobtrusive measures of classroom interactions that do not require behavioral observations of persons and activities.

10. Multivariate Analyses: Dimensions of the Initial Reading Acquisition Process

The question of what constitutes "good" or "bad" reading and what are desirable components of an initial reading program have been debated in the literature (Flesch, 1955; Weiner and Cromer, 1967; Chall, 1967; Smith, 1978; Shuy, 1982; Goodman, 1982, etc.). Given the operationalization of "proficiency"

as reading scores in previous empirical studies and the lack of such data in the present study, these variables could only be examined in relation to what is theoretically "good".

Based on Chall's (1967) suggestion that a "code" emphasis method is more appropriate at initial reading levels and that oral reading is essential for the initial reading process, the following methods and strategies representing those concepts were used as an operationalization of desirable or "good" process: (1) Methods; alphabet recognition, alphabet spelling, systematic phonics, word families, syllables; and (2) Strategies; round robin or circle, choral, modified echo, individual oral. The interrelationships among these nine Chall variables, English and ET reading, and 27 pedagogical variables were explored using multivariate analyses on a limited subsample having data on all the variables.

(10.1) The researcher conceptualized a unitary measure of "the Chall emphasis" which was operationalized as a count of how many of the above nine variables occurred in a given observation. A step-wise regression (Nie et al., 1975, p. 320f) was performed using "the Chall emphasis" as the dependent variable but was not interpreted because the factor analysis suggested by the "the Chall emphasis" was not unidimensional.

(10.2) A factor analysis of the 38 variables, although exploratory in nature, suggested four independent dimensions of the initial biliteracy acquisition process; "dimension" meaning an independent source of variation common to or

underlying, in this case, a group of reading acquisition process variables (Rummel, 1970).

(10.2) The first dimension was English Reading, which consisted predominantly of actual subjects of learning, having a negative relationship with Ethnic Tongue reading. Two Chall variables were related to this dimension: the occurrence of the "Word family" method and the absence of the "Syllable" method. This dimension suggested that English reading and English writing as actual subjects of learning, under the homeroom teacher, using English only as the language of instruction, commercially prepared texts published in the United States under non-ethnic auspices and workbook(s)/work-sheet(s), and the word family method tended to occur together. They are related to the absence of the subjects of ET reading, writing and language in general, the use of texts commercially prepared in the ethnic country, of ET as the language of instruction, and of the syllable method.

The second dimension, Class Size, included two Chall variables, both strategies: the presence of "Modified echo" and the absence of "Individual oral" in relation to larger class size. The "School" variable was virtually synonomous with the "Class size" variable

The third dimension, Experiential Approach, also included one actual subject of learning, English language in general and the use of the blackboard as preparation/source. The absence of the basal reader approach was related to the occurrence of these variables.

The fourth dimension, Grade Level, included three Chall variables with the "Alphabet Spelling" method and the "Round robin" strategy occurring more at the higher grade level and the "Alphabet recognition" method occurring less at the higher grade level.

These multivariate findings should be interpreted with some caution as the subsample from which it was derived contained a disproportionately large number of cases in which English reading occurred (from the Greek School), although ET reading and the grade levels were represented to the same extent as in the larger sample. Nevertheless, the four clusterings of variables was generally consistent with the findings for the pairwise relationships among them.

This analysis suggests that there are four dimensions of initial reading acquisition that underline the multitude of pedagogical variables: The relatively mutually exclusive reading of English or ET, class size, experiential or basal reader approach, and grade level. Associated with reading as subject of instruction, in both English and ET, were the use of one language only, a commercially prepared text, and synthetic decoding-word families in English and syllables in ET. English writing was associated with English reading; all the ET language skills were associated with ET reading. Class size, independent of other variables, was related to the choice of two strategies: modified echo for large and individual oral for small. The experiential approach tended to occur with the use of the blackboard and with English language in general, and with the absence of the basal

reader; the experiential approach was independent of language subject, grade level or class size. Grade level, independent of language subject, was associated with one of two synthetic methods: alphabet recognition in the lower grades and alphabet spelling in the higher grades along with the round robin strategy. The analytic methods were not clearly related to any of these dimensions, nor were the synthetic methods of systematic phonics or the strategy of choral reading.

These dimensions-English Reading, Class Size, Experiential Approach, and Grade Level-cannot on the basis of this exploratory analysis be generalized. Given the ethnographic nature of the present study observations, some variables were noted as being either present or absent. Nevertheless, these ethnographically-derived variables and resultant dimensions can serve as the basis for more structured studies, suggested in the section on future research.

11. Out-of-Class Biliteracy Acquisition and Related Variables

In summary these ethnographic observations confirmed the occurrence of out-of-class variables, suggested in some of the literature, that should be considered by administrators, reading specialists, and researchers in relation to biliteracy acquisition. The more prominent were ET acquisition in but after school, English acquisition for ESL students, integrative (parental) motivation (Gardner and Lambert 1972; Lukmani, 1972; Cooper and Fishman 1972; McDermott, 1976; Oller et al., 1977); ethnic identity (Frasure-Smith and Lambert, 1975; Taylor, 1977) and cultural congruence of in-

school (teacher) and out-of-school (community) (Gardner and Lambert, 19[illegible]; Anderson, 1974; Johnson, 1975; Rincon and Ray, 1975; Fiske, 1982).

As suggested by this study these influences are clearly present and the nature and magnitude of their influence on biliteracy acquisition should be taken into account in planning curricula and in evaluation.

Conclusion

The present study of initial reading acquisition in English and the ethnic tongue and of a myriad of related pedagogical process variables was based on 164 ethnographic observations in two schools representative of an (im)migration-based biliteracy tradition. The study yielded ethnographically derived variables and a coding format that provided for the quantification of those variables. Although these findings cannot be generalized, several suggest important implications for bilingual education: English and ethnic tongue reading occurred to similar extents: reading in both languages occurred more than other language skills, and actual reading occurred more frequently than intended; both languages were used in nearly half of the observations, with 82% of such usage being in a non-interfering manner; oral reading strategies predominated; basal readers were used almost exclusively.

Exploratory analyses, including multivariate analyses, suggested that significant relationships do exist among

reading and process variables, and suggest four independent dimensions of the initial reading acquisition process: English Reading, Class Size, Experiential Approach and Grade Level. The "School" variable functioned the same as the "Class size" variable in the regression analyses, suggesting that differences between schools on study variables were attributable to differences in class size. The Chall-emphasized methods (decoding) and strategies (oral) did not constitute a unitary dimension.

Implications for Reading Education and Administration

1. Since there is little related literature on the dynamics of what occurs in a bilingual classroom the current study has added a new dimension of information based on ethnographic inquiry into the general nature of the pedagogical influences operating in the process of initial reading acquisition in English and in the ethnic tongue. This suggests that it might be of value for reading and curriculum specialists and educational administrators, to more consciously utilize such a viewpoint in understanding and assessing both "process" and "product" of initial reading acquisition in not only biliteracy programs, but in monolingual and monolingual second-language-learner programs as well.

2. The belief of the present federal administration that it is counter productive to the acquisition of English literacy to have programs dedicated to preserving a student's native language is not supported by this study. Almost half of the observations in this research were consistent with Fishman's

hypothesis that each language does provide a "...context for learning, using, and evaluating each other." Curriculum specialists in planning curriculum for bilingual classes should provide for the utilization of both languages with considerable confidence that it will not interfere with the initial reading process.

3. The present study findings suggested that reading educators and administrators should consider the possibility that reading is occurring to a greater extent than their intended curricula specify, and that, as Weeks (1979) suggested, an early emphasis on acquisition of reading can enrich the "total language base" (other language skills) by increasing a reader's vocabulary and by providing different opportunities for children to encounter different sentence structures in reading than in speech.

4. The finding, that the use of the ethnic tongue alone did not, on the whole, actually increase with grade level suggests that such use needs closer scrutiny. It also calls attention to the possibility that the ethnic tongue cannot be assumed to be L_1.

5. The differences between schools on, for example, choice of reading strategies or class units, cannot be assumed to be a function of culture (e.g. Greek chorus or one-room schoolhouse) but may rather be the result of practical considerations such as class size.

6. The overwhelming reliance of the basal reader suggests the need for administrators and educators to maintain a clear

awareness of the relative influences of practicality, convenience, expediency, pedagogical philosophy, personal, political, and cultural considerations on their decisions about not only materials but other pedagogical techniques as well.

7. The influences of parental motivation and of cultural congruence were qualitatively observed to function in the dynamics of biliteracy acquisition. They should be considered by educators and administrators in teacher training, and in planning curricula and evaluation. Such a consideration can increase sensitivity to student differences in ethnic background, and reinforce the cultural heritage found in a pluralistic society.

Future Research

The present study identified the extent to which a myriad of variables occurred and the relationships that existed among them in the processes of initial reading acquisition for English and for the ethnic tongue at two ethnoreligious schools in New York City.

As a researcher, curriculum specialist, course coordinator, and teacher this researcher suggests the following further research utilizing the present study variables:

1. Further use of the present study's Protocol Observation Coding Form (POCF) would benefit from the following changes of specific items in the variable groups:

(a) "Preparation/Source of Materials" should

include an item for basal reader as a type of material, as well as a type of approach. Categories for commercially prepared workbooks/worksheets, books other than texts, and calendars, charts and posters, etc., should reflect where they came from (ethnic country, United States/ethnic or non-ethnic auspices).

(b) The variable, "Themes of Reading/Learning Materials" should be coded as independent dichotomous items rather than as a mutually exclusive variable. Ethnic and non-ethnic content proved to be mainly irrelevant and should be eliminated. Several items should be added to this variable group including fairy tales and animal stories.

(c) Unobtrusive measures should include items for teacher-made and student-made charts and posters using written language, and for those that use photos, drawings, and designs.

2. An important use of open-ended, non-structured exploratory research in general and ethnographic research in particular is to suggest specific foci for structured studies. In particular, a structured study utilizing the coding framework established for this research at a variety of public schools might be conducted. This study should include planned, scheduled visits that cover a two-year period which are made at regular intervals throughout the school year.

3. In order to examine how English and the ethnic tongue provide a context for learning through their use and evalu-

ation for each other, the ways they are used in the classroom and for what purposes, could be investigated.

4. Since the observations for the current study focused on classes that were ostensibly language acquisition, there was little data from which to make inferences about language used in relation to other subjects. A study could be conducted to look at how English and ET are used in relation to non-language skills subjects.

5. Further investigation into the role of (out-of-school) social and environmental variables on the biliteracy acquisition process via structured interviews with parents, and community members is suggested.

6. Investigation into the role(s) of student, teacher, and parental attitudes regarding social, affective and instructional factors on the biliteracy acquisition process via ethnographic inquiry is recommended.

7. The factor analytic identification of dimensions of the initial reading acquisition process needs to be replicated using all study variables and a sample of approximately 250 cases (observations). A checklist for presence or absence of variables would eliminate the problem of missing data. More discrete measures of their occurrence, such as amount of time, similar to the Significant Bilingual Instructional Features Study (1983), occurring would yield interval data and be more appropriate for factor analysis.

8. Other variables which could be examined in relation to those in the present study include:

(1) Proficiency. Several of the key concepts in

the literature on bilingualism (biliteracy per se) were related to the issue of proficiency: (a) the degree of proficiency a person may have in both languages. (b) how proficiency in a first language (L_1) was related to a second language (L_2).

This study involved ethnographic observatons of the reading acquisition process and did not test proficiency in reading. One could not ascertain whether the students were compound or coordinate bilinguals (Weinreich, 1953; Albert and Obler, 1978; McLaughlin, 1978) since there was no specific information about what the students' first languages were. In addition this study did not look at the individual but at the class as the basic observational unit.

It would be valuable to examine standardized pre and post tests of L_1 and L_2 reading proficiency concurrently with a structured examination of the process variables that occur in bilingual classrooms. This should be done by controlling for level at which ET reading is introduced as a subject of learning. The dimensions of the initial reading acquisition process could be examined in relation to proficiency, with the possibility of regression analyses identifying process variables that predict "good" reading.

(2) Types of Language Programs. All of the reading acquisition and pedagogical variables could be compared for the various types of monolingual and bilingual programs.

(3) Pupil Interest. Further research is needed regarding the relationships of various ethnic and/or non-

ethnic themes of reading materials to pupils' reading interest inventories.

* * *

Exploratory analyses have suggested significant relationships that do exist among reading and process variables, and that there are independent dimensions of the initial reading acquisition process. Synthetic (decoding), but not analytic (meaning), methods were related to reading and to grade level. Reading strategies were related to class size.

The present study has provided a basis for more structured studies and the possibility of identifying process predictors of reading proficiency. The ethnographic process has highlighted influences and raised questions for classroom teachers, reading and curriculum specialists, and educational administrators about assumptions that may often be overlooked in planning beginning language arts programs.

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APPENDIX I

INVENTORY OF VARIABLES RELATING TO BILINGUAL CLASSROOMS

(from Mackey 1976, pp.142-145; translated by B.A. Rudes)

(1) The student

a) his/her age
b) birthplace
c) where he/she has lived
d) schools attended
e) years at each school
f) the family milieu

1 - income
2 - education
3 - social mobility
4 - educational aspirations
5 - geographic mobility

g) the language(s) of the home

1 - stability (or change)
2 - degree of use
3 - linguistic competence
4 - ethnic attitudes
5 - trips abroad
6 - available books, magazines, newspapers, etc.
7 - linguistic behavior of visitors

h) linguistic behavior of student at home

1 - his/her linguistic impressions
i - television
ii - radio
iii - classes
iv - movies and theatre

2 - oral language use

i - with parents
ii - with brother(s) and sister(s)
iii - with others

i) his/her attitudes

1 - ethnic attitudes
2 - attitudes toward school
3 - attitudes toward elders

j) his/her linguistic abilities

1 - ways of learning
2 - ability to understand
3 - ability to express him/herself

k) psychological profile

(2) His/her social milieu

a) the neighborhood of the student

1 - its social character
2 - proportion of each language, the respective economic status of these languages
3 - proportion of bilingual homes and their economic status
4 - proportion of "others" and their economic status

b) linguistic character of the neighborhood

1 - type of speech or of dialect of each language
2 - other languages or dialects
3 - degree of interference in normal language use

(3) His/her student milieu

a) geographic location and student population of the school

b) linguistic groups

1 - percentage and varities (language of the home)
2 - percentage and kinds of bilinguals

c) spontaneous (unmonitored) linguistic behavior

1 - interpersonal usage
2 - group (team) usage

d) The grouping of students

1 - criteria for grouping

i - by language
ii - by age
iii - by degree of comprehension of the other language

2 - number of groups
3 - population of the groups
4 - number of instructors per group and the function of each
5 - the language of interaction of each group
6 - the norms of success for each group

e) 1 - wishes of and collaboration by student organizations of the two languages

(4) The teachers

a) their linguistic behavior

1 - proportion of instruction in their native language
2 - proportion of instruction in their second language
3 - proportion in the two languages (percentage of alternation)

b) their linguistic ability

1 - in the native language
2 - in the second language

c) their professional competence

1 - years of teaching
2 - in-service training
3 - years of experience
4 - training and experience in bilingual education
5 - experience with students at the same age level
6 - professional degrees
7 - dedication
8 - flexibility

d) their teaching methods

1 - learning sequencing
2 - team teaching
3 - methods and proportion of linguistic correction
4 - the use of pictures and audiovisual techniques
5 - interaction

e) attitudes and awareness of goals

(5) Textbooks and teaching materials
a) textbooks (in each language)
b) subtitled and sound movies (in each language)
c) laboratory tapes (in each language)

(6) Syllabi
a) subjects taught in one language
b) subjects taught in the other language
c) subjects taught in both languages

(7) The structure of instruction
a) kinds of groupings
b) kinds of presentation
1 - only in one language
2 - in one language with systematic repetition in the other
3 - controlled alternation
4 - free alternation

c) kinds and contents of school supervision
d) ways in which articulated
e) language courses
f) student counselors

(8) Status of the languages and dialects
a) political status
b) economic status
c) cultural status
d) linguistic similarity

APPENDIX II

Sample Protocol

C. Riedler
11/16/79
Armenian School
Observation
English Class
1st Grade

Observer's Comments About Classroom and Lessons

1. Classroom very colorful; pictures, posters and children's work are around room. All signs, words, etc. are written in English; except for the ordinals numbers 0-10 which are on the upper part of the front bulletin board. These numbers are written in both English and Armenian with the corresponding representative symbols. Eg.

2	two
	yergoo
00	

2. The teacher often explains ideas in Armenian when some youngsters cannot understand in English.

3. The class is small, approximately 10 children. Several of the youngsters speak English with accents. Their English syntax and pronunciation is not at an age-appropriate level. One youngster, who recently arrived from Turkey, speaks no English or Armenian. The teacher feels that she is having difficulty with "reaching" this youngster.

9:30

Observation of Class Lessons

I. Calendar Lesson and Experience Chart:

A. Teacher calls on a calendar person (student) to mark the date. Calendar person goes up and marks off the date on the calendar and says, Today is _____. The teacher writes this on the board.

B. Several children read yesterday's calendar story from the chart in the front.

C. 1. Individual students provide calendar story while teacher writes it on the board

Good Morning!
Today is Friday, November 16, 1979.
We are going to start to paint our mural today.

2. The teacher points to the words in the story and class "reads" the story together.

3. Teacher points out the difference between our and are.

Sample Protocol

15 minutes

Observations of Phonics Lesson

I. Teacher started using Foundation for Reading, 2nd Ed., Durrell & Murphy, Harcourt Brace & Javonovich for the first time this year.

II. Teacher says she is very pleased with this new material. The children have made much more progress since they started using this approach.

III. Several students come from another class to participate in phonics lesson.

Phonics Lesson

A. Teacher holds up a card with the letter "V" on it. She says, What letter do these words start with, as she points to a list of words on the board.

vanilla
vegetables
vinegar
vitamins

Teacher asks students to say the word after her. She presents the words in Armenian if some of the students don't understand.

B. Teacher then asks students to listen to three words she is about to pronounce. If the word starts with the phoneme /v/ the students are instructed to raise their hands.

C. After the /v/ is completed the teacher asks children to read the ending sounds for each of the following columns. She then calls upon individual children to read the words that correspond to the "sound groups."

ear	ick	ine	ing	ice
near	kick	nine	king	nice
rear	nick	line	ring	mice
tear	lick	fine	wing	rice
fear	slick		sing	

Reading Lesson

Note: Class has two basic reading groups. Teacher thinks she really needs to have an additional group for those students who do not know much English.

- 3 -

Sample Protocol

Students are provided with independent seat work activities while a reading "group" is working with the teacher.

Group I - Text: A Pocketfull of Sunshine by Clymer & Barrett
Ginn & Co., Xerox Ed. Co.

I. Teacher places review words on the board and asks students to read them.
E.g. Jill, Bill, rides, runs, hides, can, I, go, Lad, am.

P. 32 New word THIS

T. - Look at the picture. What is it that Jill can ride?

S. - Jill can ride this.

T. - Who can tell me something about the word THIS? When you use the word THIS it can mean alot of things. You look at a picture in the book. Put your hand on the word. How is it spelled? Trace it with your finger.

P. 30 Workbook. Children are instructed to draw a picture in the space provided.

e.g.

I can hide this. _____

I can ride this. _____

This can run. _____

Seat Assign. Complete pp. 36 and 37 in workbooks.

Group II - Reading Lesson

P. 38 on board. Yes and No

T. The sound of e in yes is /ĕ/. You'll be learning it very soon in your spelling book, so if you learn it now you will know it later.

P. 39

T. Read it to yourself first.

Each child reads the ? out loud and responds by a yes or no.

Text e.g. Can Lad ride this? (There is a picture of a dog next to a bicycle.) YES or NO

Note:
Some students use fingers as guide, others use pencils.

Sample Protocol

Teacher writes the letter F on the board. She asks to give her a word that starts with F. Several students provide words starting with /F/. Students are then instructed to go back to their seats and complete independent assignments.

Note: There are approximately 10 children in class. Groups are 4 - 5 in a group. Children worked well independently.

Observer's Note:

After attending the 4th Grade at Holy Martyr's School children do not have any further Armenian schooling in a day school. They can attend the Saturday school, which is held at the day school.

There is also an extensive church school program which also uses the day school facility.

APPENDIX III

Categories used for Coding 1979-1982 Project

1. School - (A)rmenian, (F)rench, (G)reek, (H)ebrew

2 & 3. Protocol observation based on date of observation
Numers go in sequence based onthe amount of observations (categorizations) for a particular date.

e.g., observation date 04/22
1st observation categorized 01 04 22
2nd observation categorized 01 04 22

4. Language Used in or Discussed in observation

(E)ng. - EMT (A)rm., (F)rench, (G)reek, (H)ebrew
(B)oth

5. Grade observed

N = Nursery
K = Kindergarten
1
2
3+
other = Some reports were based on teacher interviews, etc.
others were not noted when reports were made

Note:
I(E) or I(A)
E or A indicate class observ. was made in

6. Observation dates

(E)early (Sept - Dec)
(M)middle (Jan - March)
(L)late (Apr - June)

7. Year observed

(a) 1979 - 1980
(b) 1980 - 1981

8. Academic Specialists

Interviews & observations
(P)rincipal, (L)earning (C)onsultant, (T)eacher, (C)ounselor - 0=observer
e.g. ot = observation of teacher
it = interview of teacher

9. Other interviews & observations

(C)ommunity (L)eaders (non-religious)
(R)eligious (L)eaders - (s)tudents - (p)arents

(V) olunteers - (O) observer
e.g. os = observation of students

10. Sociographic issues - with respect to graphic system

(a) Reading Print
(b) Reading Writing
(c) Writing Print
(d) Writing Writing

( ) indicates problems with specific language and EMT

11. Language learning in General (Grammar & Vocab)

(L) - general lang. work (Spelling, Compsit, etc.)
(R) - Reading
(S) - Speaking
(W) - Writing

Categories 12, 13, 14, 15 related to sociopedagogical aspects

Primarily Reading
*However when #11 has (W) #12, 13, 14, 15 pertains to pedagogy related to writing

12. 1 Strategies for learning to decode

(a) Analytic - (Alphabet or phon)
(b) Synthetic -
- alphabet
- phonics
(intrisic phonics method may also be referred to)
(c) Syllabaries

2 Sentence reading (usually found in Gr 2 & up)

13. Unit of Instruction used 2

(a) complete class
(b) small group
(c) individual

14. Approaches 3

a experiential
b basal reading
c individual
d teacher made material

15. Oral Reading 4

(a) round robin
(b) choral
(c) individual
(d) silent

16. Where literacy is learned

(H)ome, (S)chool, (C)ommunity

17. General Contexual background

1. School as a whole
2. Classroom
2a. Class activities
3. Parents
4. Staff
5. Students
6. Other (Community)
7. Culture-as-a-whole

18. Nature of the Material itself

(E)thnic/(N)on-(E)thnic (B)oth

1. Home
2. Community
3. Church
4. School
5. General

19. Sociolinguistic (non-standard)

(1.) Vocab
(2.) Phonology
(3.) Grammar
\+ other related to Sociolinguistic but not necessarily 1, 2, 3

20. Contrastive Language Problems

{yes} - Lexical
{No} - Grammar
- Phonology

Also √ means assoc with item but not exactly lexical, grammar or phonological

21. Use of 1 lang to help another or vice versa

E ⇒ EMT (Eng aids in learning EMT)
EMT ⇒ Eng (EMT aids in learning)

E ⇐ EMT (EMT interferes with learning Eng)
EMT ⇐ Eng. (Eng. interferes with learning EMT)

EMT-Eng } Some involvement of one lang
Eng-EMT } with the other

APPENDIX IV

Sample of Tentative Analytic Parameters ('variables')
for This Study

Some of these are derived from the previous study [Fishman et al., 1982]. The reorganized "variables" and the new ones are indicated by an asterisk. (*)

1. Protocol Number
2. School - Armenian or Greek
3. Observation Years - 1979-1980
   1980-1981
4. Observation Dates - Early - (Sept.-Dec.)
   Middle - (Jan.-March)
   Late - (April-June)
5. Level Observed - Nursery
   Kindergarten
   Grade 1
   Grade 2
   Grade 3+
   Other

*6. Site of P.O.
   class
   elsewhere in school
      another class
      learning consultant's office
      library
      lunchroom
   out of school

*7. Type of P.O.

observations of in-class lessons

observations of out-of-class lessons

interviews

observational comments within an interview

8. People involved in observation

Teacher

Principal

Learning consultant

Title specialists

Students

Parents

Other (non-school)

9. Class size

From 10-15

From 15-20

From 20-25

From 25-35

10. Sequencing of Languages Taught

English first

ET first

Both - simultaneously

*11. Time allotments in Formal School Schedule

For English - Daily - 1-3 hrs., weekly 0-5, 5-10

For ET - Daily - 1-3, weekly 0-5, 5-10

*12. Intended subject of instruction

English

ET

Other academic subject matter

ethnic

non-ethnic

Non-academic

ethnic

non-ethnic

*13. Language skill of intended subject of instruction

Reading

Speaking

Writing

*14. Actual subject of instruction

English

ET

Other academic subject matter

ethnic

non-ethnic

non-academic subject matter

ethnic

non-ethnic

*15. Language skill of intended subject of instruction

Reading

Speaking

Writing

16. Medium of communication

    English

    ET

    Both

*17. Analytic methods of teaching initial reading skills

    Whole word

    Sentence

    Intrinsic phonics

*18. Synthetic methods of teaching initial reading skills

    Alphabet spelling

    Systematic phonics

    Word families

    Syllables

19. Unit of in-class reading instruction

    Entire class

    Small groups

    Individual

    Combination of units

20. Approaches to initial reading instruction

    Experiential

    Basal Reader

    Individualized

    Combination of approaches

21. Reading strategies

Oral

round robin or circle

choral reading

modified 'echo'

individual

combination of strategies

Silent

Both

*22. Sources of reading materials

From 'old' country (Ethnic)

Published in U.S. under ethnic auspices

Published in U.S. under non-ethnic auspices

*23. Materials used for reading acquisition

Commercially prepared

textbooks

workbooks

individual sheets

Teacher prepared

packets

individual work sheets

Other

24. Ethnicity of reading materials

Ethnic

Non-ethnic

Both

*25. Themes of reading materials

- Home
- School
- Holidays
  - national
  - religious
- Community
  - urban
  - rural

*26. Unobtrusive measures of literacy

- In class
  - signs and posters
  - books
- Out of class
  - notices in hallways
  - sign posters in library, lunchrooms, etc.

27. Influence of one language upon another

- English used to aid ET
- ET used to aid English
- English interferes with ET
- ET interferes with English

*28. Out of class reading instruction

(In school during the day)

By another teacher

By a specialist

By another student

By a parent

Other

*29. Out of school reading instruction

For students

For parents

For others

Note: These analytic parameters ("variables") will continually be refined as inter-rate reliability for coding is established.

APPENDIX V

RATERS BACKGROUNDS

Rater #2

Mrs. Gladys Ortiz
- a. B.S. in Ed.-Bilingual Education/Reading CCNY, NY, 1982.
- b. Bilingual Reading Teacher, IS. 233, Manhattan, NY.
- c. Currently in Master's Program in Counseling/Psychology at Lehman College, NY.

Rater #3

Dr. Michael Gertner
- a. M.S.-Ph.D., - French and Romance Philology, Columbia University, NY, 1971.
- b. Assistant Prof. Romance Languages, University of Cincinnati, Ohio, 1971-1978.
- c. Researcher in Sociolinguistics, Language Resources Project, Yeshiva University, NY, 1971-1978.
- d. Assistant Prof. - Doctoral Program in Bilingual Education and Developmental Psychology, Ferkauf Graduate Center, Yeshiva University, NY, 1981-present.

APPENDIX VI

Directions for Analyzing the Protocol Observation Coding Forms (POCF)

1. The information presented on the Protocol Observation Coding Forms (POCF) is not in any specified order. See the Index of Items for Referral for the Protocol Observation Coding Forms.

2. Initially read through each Protocol (P) and decide how many Protocol Observations (PO's) there are in each Protocol Observation (PO).

    a. Indicate the number of the Protocol Observation on the left hand side of the unit. (See sample sheet)

    b. A separate Protocol Observation is created for:

    (1) each distinct activity

    (2) each of several activity groups

    (3) each distinct subject in an interview

Index of Items for Referral for the Protocol Observation Coding Forms (IPOCF)

		(Computer #'s)
1.	Protocol Number (PN)	(1-3)
2.	Protocol Observation (PO)	(4)
3.	Schools (Armenian, Greek)	(5)
4.	Date of Protocol Observation	(6-11)
5.	Level Observed or Discussed (Nursery-Grade 3+)	(12-15)
6.	Site of Protocol Observation Unit	(16)
6a.	Number of children in class (If #6 is "1" or "2")	(17-18)
7.	Type of Protocol Observation (Observations and interviews)	(19)
8.	People involved in PO	(20-32)
9.	Intended Subject of Instruction	(33-34)
10.	Communication Language of Intended Subject of Instruction (English, Ethnic Tongue, Both)	(35).
11.	Actual Subject of Instruction	(37-47)
12.	Communication Language of Actual Subject of Instruction	(48)
13.	Analytic Methods of Teaching Initial Reading (Whole word, Phrases, Sentences, Intrinsic Phonics)	(49-52)
14.	Synthetic Methods of Teaching Initial Reading (Alphabet Spelling, Systematic Phonics, Word Families, Syllables)	(53-56)
15.	Unit of In-Class Reading Instruction (Entire Class, Small Groups, Individual)	(57-59)
16.	Approaches to Initial Reading Instruction (Experiential, Basal Reader, Individualized)	(60-62)
17.	Reading Strategies (Oral and Silent)	(63-68)

18. Reading Materials (Preparation and Source) (69-75)

19. Theme of Reading Material (76-77)

1 (80)

20. Unobtrusive observations of language materials in physical environment (Reading material present, but not utilized in the course of the activity taking place during the protocol observation.) (5-28)

2 (80)

Class Sizes for the Armenian & Greek Schools: 1979-1980, 1980-1981

Armenian School

1979-1980

English	Armenian
1. Nursery - 15	same
2. Kingergarten - 19	same
3. Grade 1 - 10	same
4. Grade 2 - 17	same
5. Grade 3 - 18	same

1980-1981

1. Nursery - unknown	--
2. Kingergarten - unknown	--
3. Grade 1 -	16
4. Grade 2 - 9	9 & 17 from Gr. 4 & 5

Greek School

1979-1980

English	Greek
1. Kingergarten - 25	same
2. Grade 1 - 28	same
3. Grade 2 - 25	same

1980-1981

1. Kindergarten - 25+	same
2. Grade 1 - 37	same
3. Grade 2 - 25	same

Official Faculty Designations for the Armenian and Greek Schools for the Academic Years 1979-1980, 1980-1981

Armenian School (Holy Martyrs)

Principal: Mrs. Sarah Dadourian

English Classes 1979-1980; 1980-1981

1. Nursery, Kindergarten, Grade 2, Grade 3 had the same teachers
2. Grade 1 - Mrs. K. - 1979-1980
   Miss Z. - 1980-1981

Armenian Classes 1979-1980; 1980-1981

1. Nursery & Kindergarten had a specific Armenian teacher who worked in the Nursery and Kindergarten classes in the presence of the respective English teachers for both years.
2. Grades 1-4 - Nadia taught these classes for both years of the study.

Greek School (St. Spyridon)

Principal: Mr. Papadopoulous

English Classes 1979-1980

1. Kindergarten - Mrs. Ziotos - all day from Sept.-Nov. a.m. only for the rest of the year
   - Mrs. Hatzis - p.m. only from Nov.-June
2. Grade 1 - Mrs. Condos
3. Grade 2 - Mrs. Semetis
4. Grade 3 - Mrs. Sills

1980-1981

1. Kindergarten - Mrs. Ziotos - a.m. only from Sept.-Nov returned in Feb. from a child care sabbatical
2. Grade 1 - Mrs. Condos

3. Grade 2 - Mrs. Hatzis

4. Grade 3 - Mrs. Sills

Greek Classes 1979-1980; 1980-1981

1. Grades 1-3 - Mrs. Konstoulos - Sept.-Nov., 1979-1980;
Grades 3-5, 1980-1981

Grades 1-2 - Mrs. Ziotos - Nov.-June, 1979-1980;
Sept.-Nov., Feb.-June, 1980-1981

Reading Materials Used in Armenian and Greek Schools

Armenian School

English Materials - All material published in U.S.A., non-ethnic auspices

1. Nursery - teacher prepared materials

2. Kindergarten - Lock, Listen, Learn, Bockman Readiness Program, Harcourt Brace & Jovanovich, Inc., U.S.A.

3. Grade 1 - Foundations for Reading, 2nd Ed. (Phonics) Durrel & Murphy, U.S.A.

   A Pocketful of Sunschine, (Basal Reader & Workbook) Ginn & Co., Xerox Education Co., U.S.A.

   A Duck Is a Duck, (Basal Reader, Skillpack & Workbook) Ginn & Co., U.S.A.

   Helicopters and Gingerbread, (Basal Reader, Skillpack & Studybook) Ginn & Co., U.S.A.

4. Grade 2 - Basal Reader & Workbook, Ginn & Co., U.S.A.

Armenian Materials - under ethnic auspices

1. Nursery - teacher prepared ditto sheets & charts

2. Kindergarten - Readiness Book prepared by Diocese of the Armenian Church of America, N.Y.C., U.S.A.

3. Grade 1 - Armenian reader, workbook & conversation books prepared by Diocese of the Armenian Church of America

   teacher prepared materials

4. Grade 2 - Armenian reading text and workbooks prepared by Diocese of the Armenian Church of America

   Teacher prepared materials (dittos, transparencies)

Greek School

English Materials - Published in U.S.A. under non-ethnic auspices

1. Kindergarten - Breaking the Code (Alpha Series), records, filmstrips, ditto sheets, Avista Corp. NDE Division, U.S.A.

   Ditto alphabet sheets, Jenn Publications, U.S.A.

2. Grade 1 - English Alpha Series, records filmstrips, chatterbook dittos, Avista Corp. U.S.A.

   Phonics We Use (phonics series), U.S.A.

   Bank Street Readers and workbooks, Bank Street, U.S.A.

   Basic Goals in Spelling, by Kottmeyer, U.S.A.

3. Grade 2 - Bank Street Reading Series

   Phonics We Use Series

   Basic Goals in Spelling Series

Greek Materials 1979-1980 - Under ethnic auspices

1. Kindergarten - Teacher prepared ditto sheets

2. Grade 1 - Greek reader published in Greece

   teacher prepared dittos and work materials

3. Grade 2 & 3 - same as Grade 1

   Religius textbocks published in Greece

1980-1981

Grades 1, 2, & 3 - Greek readers and textbocks written in Demotica (modern Greek). Published in Greece

PROTOCOL OBSERVATION CODING FORM

A separate unit is created for:
(a) each distinct activity
(b) each of several activity groups
(c) each distinct subject in an interview

1. Protocol number (PN) _____ _____ _____ (1-3)

2. Protocol observation (PO) _____ (4)

3. School 1. Armenian
2. Greek _____ (5)

4. Date of Observation _____ _____ _____ (6-11)
month day year

5. Level observed or discussed: (check as many as apply)
1. Nurs./Kgn. _____ (12)
2. Grade 1 _____ (13)
3. Grade 2 _____ (14)
4. Grade 3 and above _____ (15)

6. Site of POU (one answer only)
1. Official Classroom _____ (16)
2. Classroom other than official
3. Learning Consultant's office
4. Library
5. Hallways
6. Lunchroom
7. Other - in school
8. Out of school

6a. (If #6 is "1" or "2")
No. of children in class _____ _____ (17-18)

7. Type of POU (one answer only)
(Activity includes People and Behaviors)
1. Observation of formal/planned/structured activity _____ (19)
2. Observation of casual/casual/unstructured activity
3. Interview (Observer participates)

4. Observation of unobtrusive language (reading) materials in physical environment (no people involved).

(If POU is an interview code interview content in the items that follow.)

8. People involved in POU

For each category, code:
(Blank)---=not involved
1=interacting in POU
2=discussed but not present

(If ET (ethnic tongue) language teacher is not official class teacher, she is special subject teacher.)

TEACHER:
(1) Official day school class _____ (20)
(2) Special subject day school _____ (21)
(3) After school _____ (22)

PRINCIPAL _____ (23)

LEARNING CONSULTANT _____ (24)

TITLE SPECIALIST (Bd. of Ed. Fed., other) _____ (25)

STUDENT:

(1) Regular day school _____ (26)

(2) As instructors _____ (27)

(3) After school _____ (28)

PARENTS:

(1) Regular day school _____ (29)

(2) As instructors _____ (30)

(3) As after school students _____ (31)

OTHER (Specify):

_____ _____ (32)

9. Intended subject of instruction: _____ _____ (33-34)

(one answer)

Language in general: (Any activity related to the subject of language; not including reading, writing, or speaking.)

01 English
02 Ethnic Tongue (ET)

Reading: (The process by which a person learns a system of rules for extracting information from a text. This can be done through the application of various methods, strategies, and approaches.)

03 English
04 Ethnic Tongue (ET)

Writing: (The information of characters as letters, words, symbols. These characters have basic components that are either letter-sound characters, syllable-sound characters, or word-concept characters.)

05 English
06 Ethnic Tongue (ET)

Speaking: (Vocal communication of the system of sounds (phonics) of a particular language. Refers to either letter-sound correspondence, syllable-sound, or word-concept units. Does not include reading aloud.)

07 English
08 Ethnic Tongue (ET)

Other Academic: (i.e. not language)

09 Ethnic (e.g. ethnic number system, history lesson about an ethnic hero)
10 Non-ethnic

Non-Academic: (e.g. art, music)

11 Ethnic
12 Non-ethnic

10. Communication language of intented subject of instruction _____ (35)

(code one)

1. English

2. Ethnic Tongue (ET)

Both: (Influence of one language upon another)

3. English used to aid ET
4. ET used to aid English
5. English interfers with ET

6. ET interfers with English
7. Neutral - (both present, neither aiding or interfering)

11. Actual subject of instruction:

(check as many as apply)

Language in general:

English ____ (36)

Ethnic Tongue (ET) ____ (37)

Reading:

English ____ (38)

Ethnic Tongue (ET) ____ (39)

Writing:

English ____ (40)

Ethnic Tongue (ET) ____ (41)

Speaking:

English ____ (42)

Ethnic Tongue (ET) ____ (43)

Other Academic Subject Matter:

Ethnic ____ (44)

Non-ethnic ____ (45)

Non-Academic:

Ethnic ____ (46)

Non-ethnic ____ (47)

12. Communication language of actual subject of instruction. ____ (48)

(code one)

1. English only
2. Ethnic Tongue (ET)only

Both: (Influence of one language upon another)

3. English used to aid ET
4. ET used to aid English
5. English interfers with ET
6. ET interfers with English
7. Neutral - (both present, neither aiding or interfering)

13. Analytic (Whole to part) methods of teaching initial reading skills:

(check as many as apply)

Whole Word - (Entire word is pronounced and combined with other words to form sentences) _____ (49)

Phrases - (Whole words pronounced in groups) e.g. the black cat _____ (50)

Sentences - (Words read as a string of individual words without phrases) _____ (51)

Intrinsic Phonics - (Phonics introduced after analyzing sight words) _____ (52)

14. Synthetic - (from part to whole) methods of teaching initial reading skills:

(check as many as apply)

Alphabet Spelling (letters of words are pronounced and then the word is pronounced) _____ (53)

e.g. "c"-"a"-"t" = Kæt=(kăt)

Systematic Phonics (letters of words are pronounced in sequence and then sounds are combined into a word) _____ (54)

e.g. "k"-"æ"-"t" = kæt=(kăt)

Word Families (words are built on base sound units either beginning, medial, or ending) _____ (55)

e.g. -æ t (ăt)
f -æ t (făt)
b -æ t (băt)

Syllables (The syllable is the unit of pronunciation. Syllables are combined to pronounce words.) ____ (56)

e.g. (ham—ɔr) = "hammer"

15. Unit of in-class reading instruction:

(check as many as apply)

Entire class ____ (57)

Small groups ____ (58)

Individual (teacher working with student not individual answering in group setting) ____ (59)

16. Approaches to initial reading instruction:

(check as many as apply)

Experiential -(Students provide sentences for a reading story based on their needs and experiences. The teacher guides the class in the selection of appropriate words.) ____ (60)

Basal reader -(One of a series of graded readers prepared by a publishing company. The series contain teacher manuals and accompanying workbooks.) ____ (61)

Individualized -(Each child in the class is reading something different at the same time.) ____ (62)

17. Reading Strategies:

(check as many as apply)

Oral:

Round robin or circle -(Each pupil in turn reads a small portion aloud while others follow along silently.) ____ (63)

Choral reading -(An entire group or class reads every line together.) ____ (64)

Modified "echo" -(Teacher reads the text while students read along with her.) ____ (65)

Individual oral -(An individual student is called upon to read a portion of the ____ (66)

text. There is no system for taking turns as in round robin or circle reading.)

Silent:

Directed class or group -(Students read silently to seek answers to the purpose-questions that the teacher has set.) _____ (67)

Individual silent -(An individual student is directed to silently seek answers to the purpose-questions the teacher has set.) _____ (68)

18. Reading Materials - preparation and source

(check as many as apply)

Commercially-prepared text:

From the ethnic country _____ (69)

U.S., under ethnic auspices _____ (70)

U.S., non-ethnic auspices _____ (71)

Teacher-prepared text _____ (72)

Commercially-prepared worksheet(s)/book _____ (73)

Teacher-prepared worksheet(s)/book _____ (74)

Other _____ (75)

19. Theme of reading material:

(code one only) _____ _____ (76-77)

(if dual theme, note elsewhere)

Ethnic		Non-ethnic of both
01	Home	08
02	School	09
03	National holiday	10
04	Religious holiday	11
05	Urban community	12
06	Rural community	13
07	Other	14

1 (80)

Protocol Number _____ _____ _____ (1-3)

Protocol Observation _____ (4)

20. Unobtrusive observations of language materials in physical environment: (Any reading material present- but not utilized in the course of the activity taking place during the current protocol observation - in classrooms, hallways, lunchroom, bulletin boards, library, auditorium, playground, church, etc.)

(check all that apply)

Language:	Ethnic Tongue		English	
Theme:	Ethnic	Non/both	Ethnic	Non/both
Intended for Reading:				
Books, commercial	_____	_____	_____	_____ (5-8)
Books, other	_____	_____	_____	_____ (9-12)
Charts & Posters commercial	_____	_____	_____	_____ (13-16)
other	_____	_____	_____	_____ (17-20)
*Incidental, comm.	_____	_____	_____	_____ (21-24)
*Incidental, other	_____	_____	_____	_____ (25-28)

*Incidental-not intended for or explicitly for reading instruction.

2 (80)

APPENDIX VII

Revised Directions for Analyzing the Protocol Observation Coding Forms, (POCF)

1. The information in the Protocols may not occur in the order they occur on the Protocol Observation Coding Forms (POCF). (See the Index of Items for Referral for the Protocol Observation Coding Forms.)

2. Initially read through each Protocol and identify the Protocol Observation (PO's) as follows:

   A new unit is created for:

   (a) Each distinct intended subject of learning whether observed or described in an interview. (Activities that are not related intentionally or actually to reading acquisition are considered non-applicable- (N/A) - and are not to be coded.)

   (b) Change in site of activity observed or described.

   (c) Change in people doing activity. (not including parallel subgroups)

   (d) Change from material used in intended subject of learning to unobtrusive materials.

**In identifying PO's, if at least one of Items 6, 8, 9A and 10 does not change, the PO does not change.

For interviews, PO's to be identified and coded in the same manner as observed people, activities, and materials.

3. For purposes of coding, use the following definitions:

   (a) Intended subject of learning - planned or purported to be. If not specified, it should be inferred. If it cannot be inferred, code as unknown.

   (b) Actual subject of learning - e.g. may be intended reading lesson with writing and speaking also actually occurring.

   (c) Reading - The process by which a person learns a system of rules for extracting information from written material. This can be done through the application of various methods, strategies, and approaches.

   (d) Writing - The formation of characters as letters, words, and symbols. These characters have basic components that are either letter-sound characters, syllable-sound characters, or word-concept characters.

(e) Speaking - Vocal communication of the system of sounds (phonics) of a particular language. Refers to either letter-sound correspondence, syllable-sound, or word-concept units. Does not include reading aloud.

(f) Language in general - Any activity related to the subject of language that is not specifically focused on a single language function, i.e. reading or writing or speaking.

4. For further information regarding the coding of items of the Protocols refer to:

(a) Index of Items

(b) Class Sizes for the Armenian and Greek Schools

(c) Official Faculty Designations for the Armenian and Greek Schools

(d) Reading Material Used in the Armenian and Greek Schools

NOTE: REFER TO THE DEFINITIONS AND OTHER MATERIAL FREQUENTLY!

Revised Index of Items for Referral for the Protocol Observations Coding Forms (IPOCF)

(Items #'s)		(Computer #'s) (Code #'s)
1.	Protocol Observation Number (PN)	(1-3)
2.	Protocol Observation Unit (PO)	(4-5)
3.	Schools (Armenian, Greek)	(6)
4.	Date of Protocol Observation	(7-12)
5.	Level Observed or Discussed	(13)
6.	Site of Protocol Observation	(14)
7.	Number of Children in Class	(15)
8.	Type of Protocol Observation	(16)
	(Observations, Interviews, Unobtrusive materials)	
9.	Subject of Learning	
	A. Intended	(17-18)
	B. Actual	(19-31)
10.	People involved in POU	(32-50)
11.	Language used	
	A. In intended subject	(51)
	B. In actual subjects	(52)
12.	Methods of Teaching Initial Reading Skills	
	A. Alphabet recognition	(53)
	B. Analytic (from whole to part)	(54-57)
	C. Synthetic (from part to whole)	(58-61)
13.	Unit of in-class reading/learning activity	(62-65)
14.	Approaches to initial reading instruction	(66-69)
15.	Reading strategies	(70-77)
	1	(80)

16.	Preparation and Source of Materials Used for Reading Activity	(6-15)
17.	Theme of Materials used for Reading Activity	(16-17)
18.	Unobtrusive Observations of Language Materials in Physical Environment	(18-41)
	2	(80)

REVISED PROTOCOL OBSERVATION CODING FORM

Item Number — Code-Number

1. Protocol (PN) ___ ___ ___ (1-3)

2. Protocol Observation (PO) ___ ___ (4-5)

3. School 1. Armenian ___ (6)

2. Greek

4. Date of Observation ___ ___ ___ (7-12)
month day year

5. Level Observed or Discussed: (ONE ANSWER ONLY) ___ (13)

1. Nurs./Kgn.
2. Grade 1
3. Grade 2
4. Grade 3 & above
5. Grades in general
6. School in general
7. Other (specify) _____

6. Site of Reading Acquisition/Learning in PO: (ONE ANSWER ONLY)

1. Home room ___ (14)
2. Classroom other than home room
3. Learning Consultant's office
4. Library
5. Hallways
6. Lunchroom
7. Other - in school
8. Church
9. Home
0. Other - out of school

7. (If #6 is "1" or "2"), No. of children in class ___ (15)

8. Type of POU: (Code ONE of the below) ____ (16)

1. Observation of people & activities and materials in use.

2. Interview about activities, people, and materials; discussed but not observed.

3. Observation of unobtrusive language (reading) materials in physical environment; no people involved.

9. Subject of Learning:

A. Intended (planned or purported) (Code ONE of the below)		B. Actual* (Check as many as apply)	
____ ____ (17 & 18)	Language in general		
	01 English	____	(19)
	02 ET	____	(20)
	Reading		
	03 English	____	(21)
	04 ET	____	(22)
	Writing		
	05 English	____	(23)
	06 ET	____	(24)
	Speaking		
	07 English	____	(25)
	08 ET	____	(26)
	Other Academic (e.g. not language)		
	09 Ethnic (e.g. ethnic number system, history lesson about an ethnic hero)	____	(27)
	10 Non-ethnic	____	(28)

* See Revised Directions for Analyzing POCF's for definitions.

Non-Academic (i.e. art, music, religion, socializing)

11. Ethnic ____ (29)

12. Non-ethnic ____ (30)

Unknown

13. ____ (31)

10. People involved in PO

For each of the following, use this code:

Blank - not involved

1. - Involved in reading acquisition/learning activities, whether observed or described.

2. - Present in interview

(TEACHERS)

a. Day school home room ____ (32)

b. Day school special subject ____ (33)

(If ET teacher is not home room teacher she is special subject teacher regardless of which classroom is used)

c. After school ____ (34)

d. Saturday school ____ (35)

e. Sunday school ____ (36)

f. Out of school ____ (37)

(STUDENTS)

g. Day School ____ (38)

h. As peer instructors ____ (39)

i. After school ____ (40)

j. Saturday school ____ (41)

k. Sunday school ____ (42)

l. Non-specified ____ (43)

(PARENTS)

m. Of day school children ____ (44)

n. As reading facilitators (formal or informal) ____ (45)

o. Of after school students ____ (46)

p. As after school students ____ (47)

q. PRINCIPAL ____ (48)

r. CONSULTANT/SPECIALIST ____ (49)

s. OTHER (specify) _____ ____ (50)

11. Language used

A. In intended subject of learning

(Code ONE of the below)

____ (51)

B. In actual subject of learning

(Code ONE of the below)

____ (52)

1. Only English used
2. Only Ethnic Tongue (ET) used

Both languages used:

3. English aiding ET
4. ET aiding English
5. English interfering with ET
6. ET interfering with English
7. Neither aiding or interfering

12. Methods of teaching initial reading skills:

(CHECK (✓) all that apply)

A. Alphabet recognition ____ (53)

B. Analytic (from whole to part)

Whole Word - (Entire word is pronounced and combined with other words to form sentences.) ____ (54)

Phrases - (Whole words pronounced in groups e.g. the black cat) ____ (55)

Sentences - (Words read as string of individual words without phrases.) ____ (56)

Intrinsic Phonics - (sight reading is stressed, Phonics introduced through the process of analyzing sight words) ____ (57)

C. Synthetic (from part to whole)

Alphabet Spelling - (Letters of words are names in sequence and then the word is pronounced)
e.g. "c"-"a"-"t"=Kæt=(kăt) ____ (58)

Systematic Phonics - (Letter-sound correspondences pronounced in sequence and then sounds are combined into words.)
e.g. "K"-"æ"-"t" =Kæt=(kăt) ____ (59)

Word Families - (Words are built on base sound units either beginning, medial or ending.)
e.g. -æt (ăt)
f -æt (făt)
b -æt (băt) ____ (60)

Syllables - (The syllable is the unit of pronunciation. Syllables are combined to pronounce words.)
e.g. (ham-ər) - "hammer" ____ (61)

13. Unit of in-class reading/learning activity:

(CHECK as many as apply)

Entire class	____	(62)
Small groups	____	(63)
Individual (Teacher working with student not individual answering in group setting.)	____	(64)
Seat work (children working alone at seat.)	____	(65)

14. Approaches to initial reading learning:

(CHECK as many as apply)

Experiential - (Students provide sentences for a reading story based on their needs and experiences. The teacher guides the class in the selection of appropriate words.)	____	(66)
Basal Reader - (One of a series of graded readers prepared by a publishing company. The series contain teachers manuals and accompanying workbooks.)	____	(67)
Individualized - (Each child in the class is reading different reading material at the same time.)	____	(68)
Other	____	(69)

15. Reading Strategies:

(CHECK as many as apply)

Oral:

Round robin or circle - (Each pupil in turn reads a small portion aloud while others follow along silently.)	____	(70)
Choral reading - (An entire group or class reads material in unison.)	____	(71)
Modified "echo" - (Teacher reads aloud while students read along with her.)	____	(72)
Individual oral - (An individual student is called upon to read aloud. There is no system for taking turns as in round robin or circle reading.)	____	(73)

Other - Any oral reading not specified above. ____ (74)

Silent:
Directed class or group - (Students read silently to seek answers to the purpose questions that the teacher has set.) ____ (75)

Individual silent - (An individual student is directed to silently seek answers to the purpose-questions the teacher has set.) ____ (76)

Other - Any silent reading not specified above. ____ (77)

1 (80)

Protocol Number ___ ___ ___ (1-3)

Protocol Observation ___ ___ (4-5)

16. Preparation and Source of Materials Used for Reading/Learning Activity:

(CHECK as many as apply)

Commercially prepared text:

From the ethnic country	___	(6)
U.S., under ethnic auspices	___	(7)
U.S., under non-ethnic auspices	___	(8)
Teacher prepared text	___	(9)
Commercially prepared work sheet(s)/book	___	(10)
Teacher prepared work sheet(s)/book	___	(11)
Books other than textbooks	___	(12)
Calendars, charts, posters, etc.	___	(13)
Blackboard	___	(14)
Other (specify) _____	___	(15)

17. Theme of Materials Used for Reading/Learning Activity:

(CHECK ONLY ONE) ____ ____(16-17)

Ethnic		Non-Ethnic or both	
01	Home	08	
02	School	09	
03	National Holiday	10	
04	Religious Holiday	11	
05	Urban community	12	
06	Rural community	13	
07	Other (specify)	14	_____

18. Unobtrusive observations of language materials in the physical environment: (Any reading material present - but not utilized in the course of the activity taking place during the current protocol observation - in classrooms, hallways, lunchrooms, bulletin boards, library, auditorium, playground, church, etc.)

(CHECK all that apply)

Language:	Ethnic Tongue		English		
Theme:	Ethnic	Non/both	Ethnic	Non/both	
Intended for READING:					
Books:					
Commercial	___	___	___	___	(18-21)
Other	___	___	___	___	(22-25)
Charts & Posters:					
Commercial	___	___	___	___	(26-29)
Other	___	___	___	___	(30-33)
Incidental:					
Commercial	___	___	___	___	(34-37)
Other	___	___	___	___	(38-41)

2 (80)

APPENDIX VIII

Pearson Correlation Coefficients for
57 Variables in Multivariate Analyses (N=47)

	CHALL VARIABLES										
	METHODS					STRATEGIES					
	Alpha Recog.	Alpha Spell.	System Phon.	Word Fam.	Syll-ables	Round Robin	Choral	Mod. Echo	Indiv. Oral	School	Level
METH: Alpha.Recog.	-										
Alpha.Spell.	.35**	-									
Syst.Phon.	.17	.07	-								
Word Fam.	-.07	.03	-.03	-							
Syllables	-.02	-.29*	-.08	-.24*	-						
STRAT: Rd. Robin	-.19	.06	-.11	.01	-.16	-					
Choral	.15	-.04	.22	-.02	.01	-.16	-				
Mod.Echo	-.08	.10	-.28*	.07	.07	.02	-.29*	-			
Indiv.Oral	.04	.14	-.16	.20	-.17	.33**	-.45***	-.11	-		
SCHOOL	-.07	-.07	-.21	.16	.13	-.05	-.40**	-.32**	.34**	-	
LEVEL	-.41**	-.55***	-.10	-.10	.24*	.22	-.04	-.14	-.20*	-.12	-
ACT.SUB: Eng.Lan.Gen.	-.19	.07	.03	.14	-.16	-.01	-.03	-.10	.16	-.05	-.07
ET Lan.Gen.	.13	-.34**	-.01	-.15	.50***	-.03	.05	-.14	-.01	.39**	.19
Read.Eng.	.01	.38**	-.07	.37**	-.51***	.19	-.15	.08	.05	-.02	-.37**
Read.ET	-.05	-.41**	.04	-.39**	.49***	.21	.21	-.02	-.08	-.01	.42***
Writ.Eng.	-.14	.07	.22	.07	-.22	.30**	-.09	-.18	-.06	-.01	-.02
Writ.ET	.11	-.16	.36**	-.24*	.24*	-.16	.01	-.06	-.04	-.14	.14
Speak Eng.	-.07	.26*	-.19	.03	-.20	.51***	.24*	.21	-.09	-.04	-.01
Speak ET	.17	-.26*	.11	-.21	.49***	.14	.21	-.14	-.13	-.10	.16
METH: Whole Wds.	.05	.23*	-.16	.00	.09	.29*	-.07	.24*	-.17	-.20	.22
Sentences	-.21	-.39**	.04	-.30**	.09	.14	.06	.21*	-.17	-.35**	.56***
Intrin.Phon.	.06	.06	-.24	.27**	-.16	.33**	-.03	.26*	-.08	-.17	-.17
UNITS: Sm.Grp.	-.16	-.02	.07	.48***	-.15	-.16	-.26*	-.19	.22*	.53***	-.06
APPRO: Exper.	-.02	-.02	-.08	.05	-.15	.02	.01	-.19	.09	.26*	-.27*
Basal Read.	-.08	-.08	-.09	-.06	.19	.05	-.01	.18	-.17	-.11	.34**
PREP: Com/Eth.Count.	.03	-.26*	.18	-.38**	.33**	-.26	.29*	-.02	-.10	-.34**	.35**
"/US Hon.Eth.	-.04	.05	-.07	.50***	-.26*	.23*	-.27*	-.01	.12	.18	-.12
"/Hbks.,Wks.	.19	.37**	.114	.07	-.19	.02	-.01	.12	-.02	-.13	-.28*
Cal,Chts,Post.	.31**	.56***	-.11	-.13	-.16	-.01	.10	-.10	.04	.08	-.45***
Blackboard	.06	.15	.11	.06	.14	.07	-.03	.06	.10	-.07	-.17*
STUDY YEAR	-.14	-.14	-.04	-.06	.14	.25*	-.10	.15	-.16	-.12	.26
TIME OF YEAR	-.35	-.20	.07	.19	-.01	.04	.11	.02	-.17	-.01	.20
CLASS SIZE	.18	.13	.12	-.25*	.01	.06	.27*	.35**	-.33**	-.89***	.02
LANG. USED: Eng.	.04	.13	-.04	.21	-.34**	.10	-.25*	-.04	.08	-.01	-.15
ET	-.16	-.16	-.08	-.24*	.24*	-.16	.29*	-.06	-.17	-.27*	.24*
Eng.& ET Mout.	.00	.00	.14	-.23	.24*	-.09	-.06	.26*	-.02	-.08	.23
Aid	.08	-.03	-.04	.18	-.02	.10	.13	-.18	.06	.34**	.26*
CLASS TEACHER	.05	.41**	-.04	.39**	-.49***	.21	-.21	.02	.08	.01	-.42***

*p ≤ .05
**p ≤ .01
***p ≤ .001

continued on pages 274-275

APPENDIX VIII

Pearson Correlation Coefficients for
37 Variables in Multivariate Analyses (N=47)

ACTUAL SUBJECTS OF LEARNING								METHODS			UNIT	APPROACHES		PREPARATIONS													
Eng. Lan.	ET Lan.	Read. Eng.	Read. ET	Writ. Eng.	Writ. ET	Speak Eng.	Speak ET	Whole Words	Sen-tences	Intrin. Phon.	Small Group	Experi-ential	Basal Reader	Connec Eth.Ct	S. Nonfth.	Wkbks., Wks.	Cal., Chts., Post.	Black-Board	Study Year	Time of Year	Class Size	Eng LANA	ET LANA	Neut.	Aid	Class Teacher
.18	-																									
.31*	-.60***	-																								
.33**	.57***	-.96***	-																							
.44***	-.27*	.44***	-.46***	-																						
.16	.34**	-.51***	.48***	-.22	-																					
.37**	-.10	.28*	-.30*	.29*	-.20	-																				
.14	.40**	-.46***	.44***	-.20	.28*	.18	-																			
.04	-.01	.05	.01	-.16	-.04	.23*	.30*	-																		
.10	.29*	-.32**	.36**	-.16	.34**	.05	.17	.36**	-																	
.16	-.03	.19	-.21	-.11	-.16	.37**	.14	.29*	.14	-																
.16	-.17	.29*	-.30*	.68	-.15	-.20	-.13	-.17	-.43***	.16	-															
.38**	-.00	.16	-.17	.21	-.15	.27*	-.13	-.04	-.17	.02	-.15	-														
.56***	.08	-.25*	.27*	-.46***	.18	-.14	.17	.16	.22	.05	.19	-.79***	-													
.26*	.10	-.72***	.79***	-.36**	.48***	-.32**	.56***	.10	.27*	-.26*	-.24*	-.24*	.50*	-												
.16	-.31**	.52***	-.54***	.02	-.26*	-.02	-.24*	.02	-.21	.23	.56***	-.26*	.33**	-.42**	-											
.14	.14	.44**	-.47***	.21	-.19	.21	-.14	-.11	-.13	.14	.07	-.19	-.04	-.41**	.09	-										
.01	-.18	.31**	-.33***	.17	-.16	.07	-.14	-.21	-.23	.01	.02	.02	-.10	-.26*	.10	.26*	-									
.19	.01	-.15	.10	.09	.14	.22	.35**	.28*	-.06	.19	-.12	.39**	-.28*	.25*	-.12	-.11	-.05	-								
.20	.07	-.08	.06	.21	.14	.01	.18	-.16	.11	.05	-.02	-.19	.24*	.06	.15	-.18	-.20	-.15	-							
.04	-.01	-.02	.06	-.10	.10	-.01	-.19	.06	.13	.04	.21	-.23	.24*	.03	.05	.10	-.16	-.13	-.24*	-						
.01	-.22	-.06	.07	-.03	.16	.16	.25*	.16	.28*	.25*	-.60***	-.21	.09	.34**	-.24*	.10	-.09	.19	.30**	-.11	-					
.23	-.41**	.67***	.71***	.36**	-.34**	.26*	-.31**	.17	-.14	.23	.17	.17	-.11	-.56***	.39**	.31**	.10	-.11	-.00	-.13	-.01	-				
.16	-.17	-.51***	.49***	-.22	.04	-.20	.28*	-.04	-.04	.16	-.15	-.15	.19	.62***	-.26*	-.32**	-.16	.14	-.02	-.01	.24*	-.34**	-			
.09	.28*	-.32**	.39**	-.09	.39**	-.16	.14	-.13	.40**	-.09	-.21	-.21	.01	.33**	-.27*	-.15	-.09	.06	.24*	.03	.16	.50***	-.21	-		
.05	.36**	-.08	.06	-.16	-.02	.01	.01	-.05	-.22	-.05	.14	.14	-.04	-.18	.01	.04	.10	-.04	-.24*	.13	-.40**	-.43***	-.19	-.27*	-	
31**	-.57***	.96***	-1.00***	.46***	-.49***	.30**	-.44***	-.01	-.36**	.21	.30*	.17	.27*	-.78***	.54***	.47***	.33**	-.10	-.06	-.06	-.07	.71***	-.49***	-.39**	-.06	-

*p ≤ .05
**p ≤ .01
***p ≤ .001